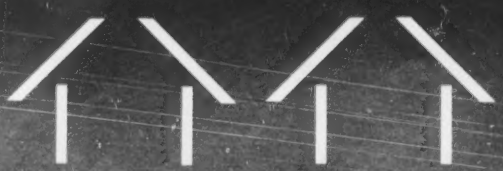
A1775-44 13/80

American Gas Association



Residential Market Survey: 1989

Residential Gas Market

Survey: 1989

(formerly the Gas Househeating Survey)

42nd Annual Survey
Gas Utility Industry
United States

Published by:

American Gas Association
1515 Wilson Boulevard
Arlington, Virginia 22209

Prepared by:

Michael I. German
Senior Vice President
Planning and Analysis Group

Richard L. Itteilag
Director
Gas Demand Analysis Division

James Pavle
Manager
Gas Demand Analysis Division

Anthony Curtis
Research Intern
Gas Demand Analysis Division

COPYRIGHT, JULY 1990
Reproduction in whole or part prohibited
without permission of copyright owners.
A.G.A. Catalog No. F00090

Contents

		Page
Introduction		1
I.	Executive Summary	2
II.	United States Housing Market in 1989	3
	New Housing - Starts	3
	New Housing - Completions	4
I.	Residential Gas Customers in 1989	6
	Total Residential Customers	6
	Househeating Customers	6
	Gas Househeating Unit Additions	6
	Househeating Conversions	8
	Market Share	10
IV.	Residential Gas Consumption	12
	Gas Consumption per Unit	12
	Conservation	14
	Prices	14
	Heating Bills	16
V.	Marketing Activity Survey	17
	Residential Appliance Marketing Programs	17
Appendix 1 -	1989 Househeating Customer and Consumption Data By Company	18
Appendix 2 -	Competitive Fuel Prices	22
Appendix 3 -	Househeating Unit Additions - 1989 Actual and 1990 Anticipated	26

List of Tables

		Page
1.	1989 Private Housing Completions by Heating Fuel	5
2.	Customers and Unit Additions (as of December 31, 1989)	7
3.	Househeating Conversions to Natural Gas in 1989 by Type of Fuel	8
4.	1990 Anticipated Additions of Gas Househeating Units	11
5.	1989 Average Annual Gas Consumption/Unit by Region	13
6.	1989 Average Conservation by Region	14
7.	Residential Fuel Price Comparisons	15
8.	1988 and 1989 Gas Househeating Bills by Division	16
9.	Gas Utility Residential Marketing	17

List of Figures

1.	Gas and Electric Single Family Home Completions 1981-1989	2
2.	Private Housing Starts--Actual and Projected 1982-1992	3
3.	Housing Completions by Region - 1989	4
4.	New Househeating Unit Additions by Region - 1989	6
5.	Gas Househeating Conversions 1970 - 1989	9
6.	Gas Househeating Market Share by Region	10

INTRODUCTION

This year's report is the 42nd annual gas "househeating" survey conducted by the American Gas Association. The title of the report has been changed this year to reflect the fact that more than just residential heating customer data are included, although such data will continue to comprise the core of the annual report on the residential gas market. It is envisioned that in future years The Residential Gas Market Survey will also incorporate data on other aspects of the residential market, such as utility marketing activities and data on non-heating equipment.

The data collected for 1989, as well as projected data for 1990, provide a unique and comprehensive portrait of the residential gas market. Detailed information is presented by state and region, including customers, fuel prices, anticipated inventory additions from new homes, and conversions from alternative fuels. **Company-specific data reported in this publication are unavailable in any other format.**

A total of 142 gas utility companies responded to this year's survey. The response rate is up nearly 9 percent from the prior year. The respondent companies represented the vast majority of the nation's residential gas customers, i.e., some 92 percent in 1989. The information provided by these utilities was expanded to obtain the state and national totals shown in Tables 2 and 4. Individual company data are listed by region and state in Appendices 1, 2 and 3. Please note that some tabular data may not add to totals due to rounding.

The American Gas Association wishes to thank those companies who participated in the survey for making this publication possible.

I. Executive Summary

Residential gas housing growth was again relatively strong in 1989. Househeating unit additions were down slightly (6%) while market shares were up even as the number of total housing starts and completions declined. Gas continues to perform well against electricity for market share in new housing.

■The total number of residential gas customers reached 49 million in 1989, up nearly 1 percent over 1988.

■Total conversions of existing units from alternative fuels to gas househeating were just over 181,000 in 1989, comparable to last year's level. Based on A.G.A. survey data, 106,000 or 58 percent of all heating conversions, were from fuel oil to gas, 36,000 (20%) were from electricity, 23,000 (13%) from LPG, and 16,000 (9%) from "other fuels" (coal, wood, etc.).

■New England had a 15 percent increase in conversions from oil. Propane conversions to natural gas had the largest national increase, 47 percent over 1988.

■Natural gas again improved its market share in new housing, while the U.S. housing construction market slowed down. For the fourth year in a row gas heated single-family home completions showed a greater market share than electricity. According to U.S. Census data the ratio was extended to 58 percent compared to 34 percent. Total new housing completions declined by 8 percent to 1.42 million in 1989. Gas' overall market share of new housing completions increased to 53 percent in 1989 from 51 percent in 1988. The overall electric share again dropped, to 40 percent from 42 percent.

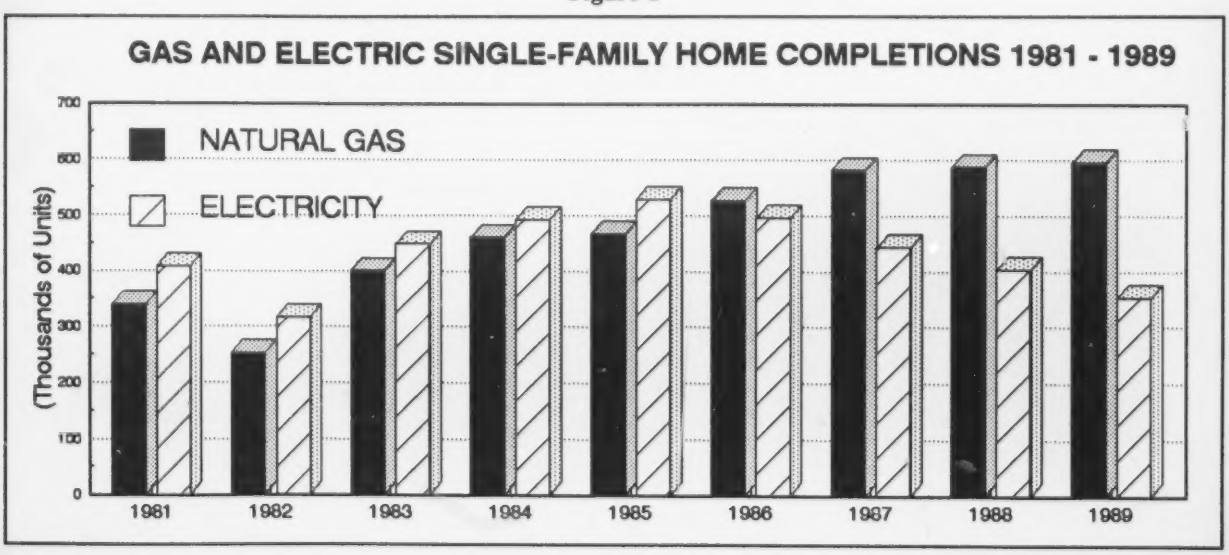
■Gas househeating unit additions from new construction numbered 652,400, a 7 percent decrease from 1988. The addition of new gas househeating units from conversions of existing units and new housing combined brought the total to 833,738 in 1989, down 6 percent from last year.

■Average year-end gas prices increased 1.9 percent in 1989. Six regions had increases of 2 to 9 percent, while three regions had decreases of 1 to 5 percent. Average annual heating bills increased in six census divisions, due to both the price increases and more heating degree days compared to last year. The heating bills increased an average 0.4 percent, despite a record cold December in much of the U.S.

■Gas utilities expect to add approximately 192,000 conversions in 1990. The 1990 projections for gas househeating additions from newly constructed units are about 1 percent higher than actual 1989 at 652,400 units.

■Gas utilities offer a wide variety of appliance marketing programs. About 50 percent of the companies with programs sell appliances while over 60 percent offer customer rebates. In addition, gas utilities offer trade support to appliance dealers, HVAC contractors and builders primarily in the form of co-op advertising.

Figure 1



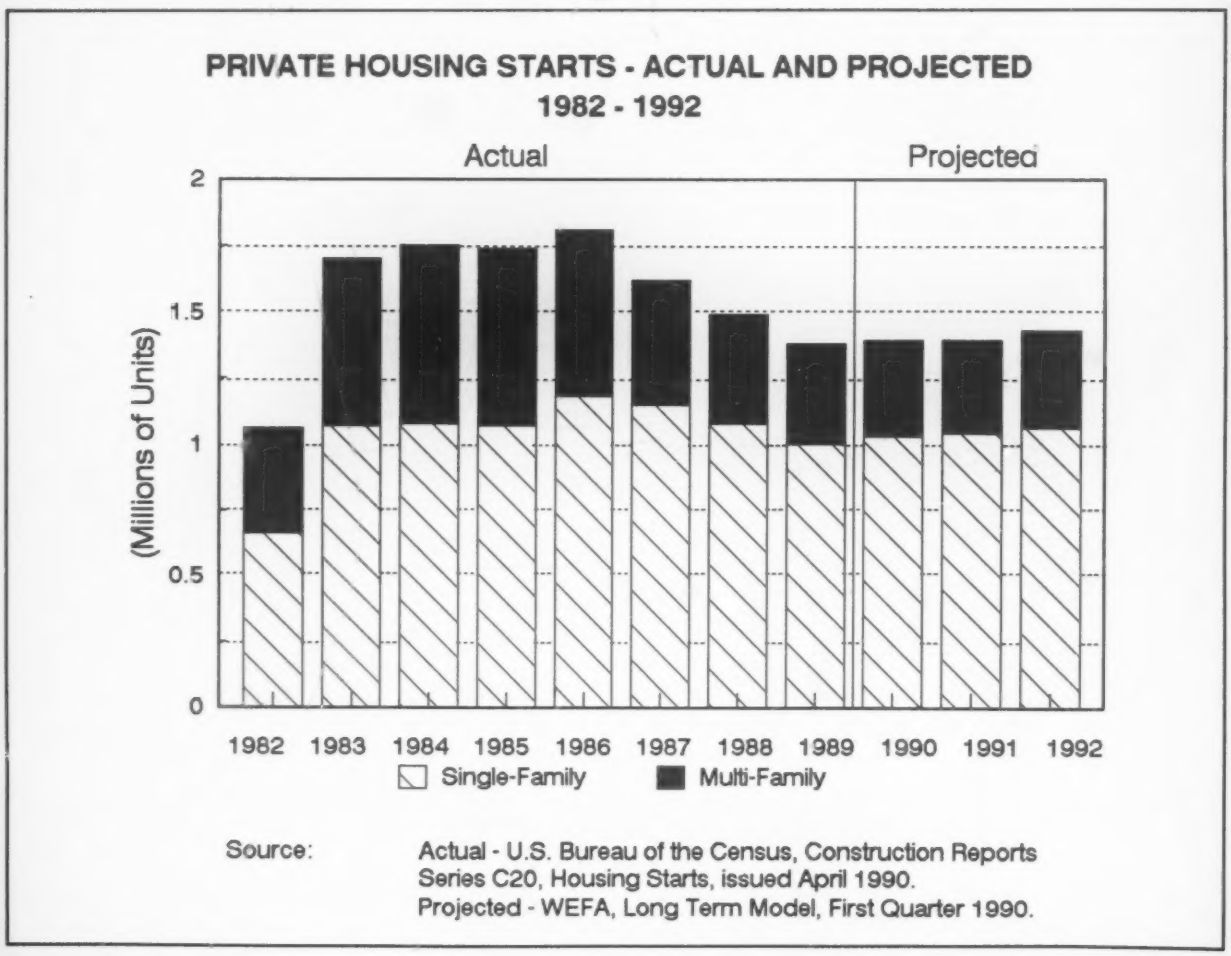
II. United States Housing Market In 1989

New Housing - Starts

The number of new private housing starts (seasonally adjusted) in 1989, 1.38 million units, was 7 percent lower than the 1987 level of 1.49 million units, but well above the 1.06 million units in 1982 (see Figure 2). The decrease from 1988 is due to declines in multi-family starts and single-family starts of about 30,000 and 80,000 units, respectively. All four U.S. regions showed a decline.

Wharton Econometric Forecasting Associates (WEFA) predicts that 1990 private housing starts will average 1.39 million units. WEFA expects the housing market to remain unchanged in 1991 and then rise again to 1.43 million in 1992. The reasons for the decline again in 1989 is a combination of demographics (fewer baby-boomers), higher costs for new homes, high vacancy rates in the multi-family sector and the negative impact of tax reform on investments in multiple-unit housing.

Figure 2



New Housing - Completions

The natural gas industry continued to gain market share at the expense of electricity. New gas completions in 1989 outnumbered new electric completions in the single-family home market and in the combined market, despite a small decline in the gas share of multi-family homes.

New gas single-family completions increased slightly to 596,000 (See Table 1). Thus, the gas share increased to 58 percent of single-family home completions, while the electric share dropped to 34 percent. Figure 3 shows how gas completions have exceeded electric completions in the single-family market for the fourth consecutive year.

Natural gas also showed a small decline in the multi-family completions market. New gas multi-family completions declined in market share in 1989 to 42%. Electric multi-family completions' market share increased slightly to 54 percent. Both fuels showed an absolute decline in 1989 multi-family completions. Electricity declined by 23,000 units, while gas declined by 29,000 units.

Overall, natural gas again improved its share of combined single- and multi-family completions in 1989 to 53 percent, up from 51 percent in 1988 and 48 percent in 1987. Combined single- and multi-family electric completions declined to 40 percent from 42 percent in 1988 and 45 percent in 1987.

Once again only in the South did new electric-heated completions among single-family homes outnumber gas-heated completions. However, as has been the trend, the difference was smaller in 1989, 94,000, compared with a difference of 118,000 in 1988 and 148,000 in 1987. In the multi-family sector gas completions outnumbered electric in two regions. Again, the South showed a declining margin (89,000) in electric-heated completions compared to gas. There was a notable decline in gas multi-family completions in the West region, which largely accounted for the lower gas share in the multi-family market this year.

Figure 3

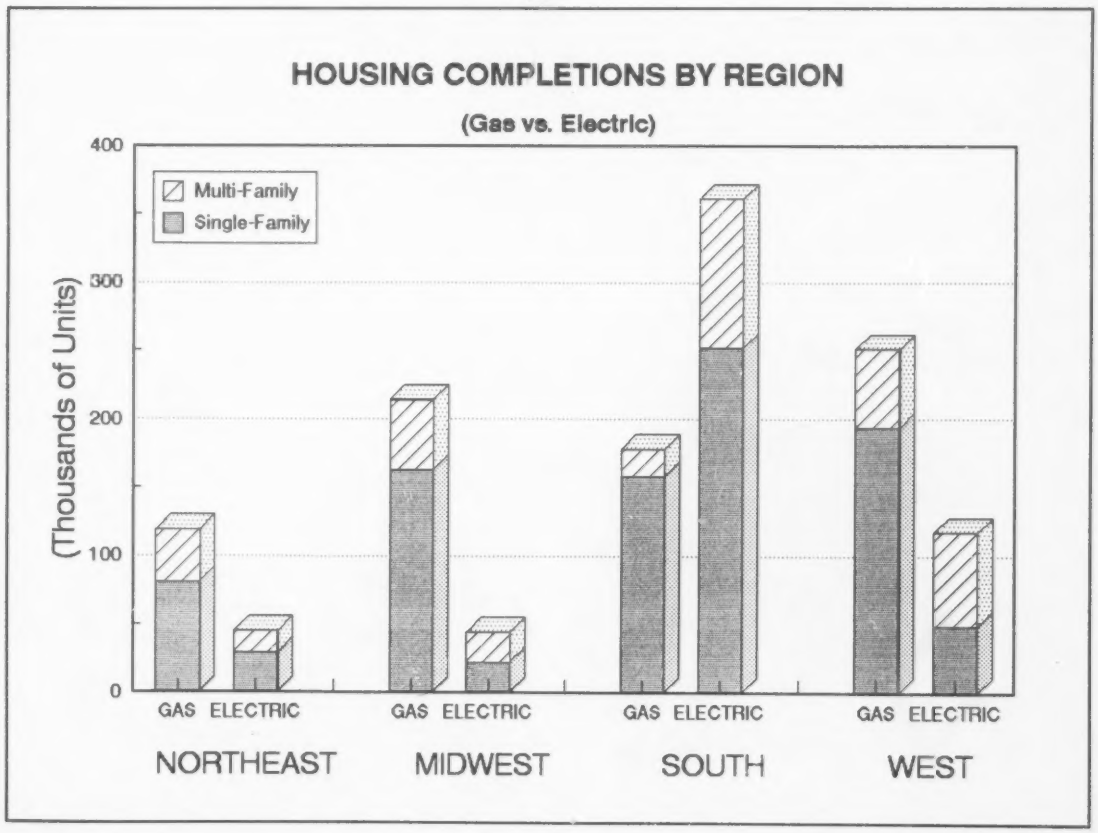


Table 1

1989 PRIVATE HOUSING COMPLETIONS - BY HEATING FUEL

(Thousands of Units)

Single-Family	Share	Units	Northeast	Midwest	South	West
Gas[a]	58%	596	81	163	158	194
Electricity	34%	352	29	22	252	29
Oil	5%	50	45	B	3	B
Other	3%	28	4	5	7	13
Subtotal	100%	1,026	159	190	420	256
Multi-Family						
Gas[a]	42%	167	38	51	20	57
Electricity	54%	215	16	22	109	68
Oil	1%	5	4	Z	1	Z
Other	3%	11	1	S	Z	5
Subtotal	100%	397	59	73	130	130
Combined						
Gas[a]	53%	761	119	214	178	251
Electricity	40%	568	45	44	361	117
Oil	4%	55	49	B,Z	4	B.Z
Other	3%	39	5	5,S	7,Z	18
Total		1,423	218	263	550	386

[a]Includes liquefied petroluem gas.

B = Insufficient sample size

Z = less than 500 units

S = did not meet publication standards

Source: U.S. Bureau of the Census, Characteristics of New Housing: 1989, Construction Reports July 1990.

III. Residential Gas Customers in 1989

Total Residential Customers

The total number of residential gas customers reached 49 million in 1989, a nearly 1 percent increase over 1988 (see Table 2). The South, with 200,640 new customers, accounted for 57 percent of all new residential customer additions. The Northeast region was the only region with a decline in customers. Most utilities define a customer as a single meter; hence, there are fewer customers than housing units.

Househeating Customers

About 43.1 million customers, 88.0 percent of all 1989 residential gas customers, were househeating customers. The gas househeating total residential gas customer ratio, i.e., market saturation, was the same as last year. Househeating customer net additions totaled 309,731 in 1989, which is down 50 percent from last year.

Gas Househeating Unit Additions

The gas industry added 833,738 househeating units in 1989, a 6 percent decline from 1988. Of total additions, 652,400 were from new housing, a decrease in new units of 7 percent from 1988. New units were also added from conversions of existing households to gas heat. Figure 4 shows the new househeating unit additions for each of the nine census divisions in 1989. Due to definitional differences these data are not directly comparable with the Census data in Table 1. The Northeast and the West showed a decline in additions from new housing. In contrast, the South showed an increase in new housing additions of 3,559 units.

Figure 4

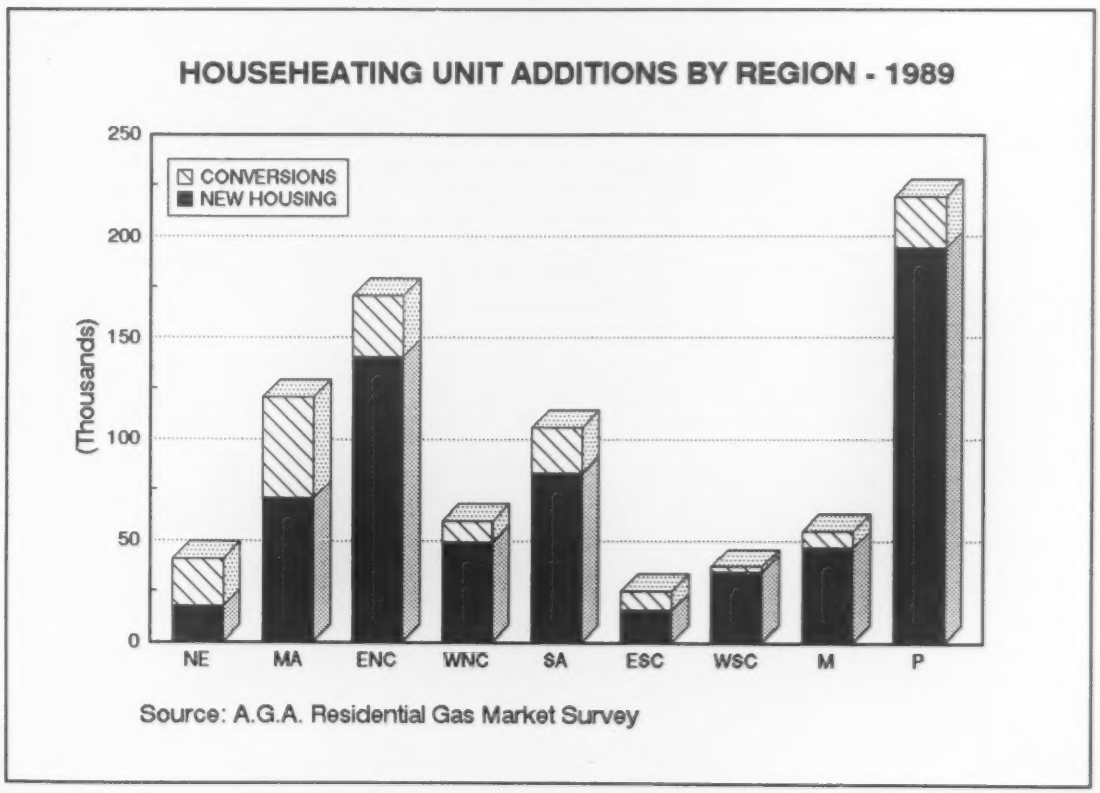


TABLE 2

CUSTOMERS AND UNIT ADDITIONS
(as of December 31, 1989)

Region, Division and State	CUSTOMERS TOTAL	CUSTOMERS HOUSE HEATING	CUSTOMERS PERCENT HEATING	UNIT ADDITIONS TOTAL (100%)	UNIT ADDITIONS NEW HOUSING NUMBER	UNIT ADDITIONS NEW HOUSING (%)	UNIT ADDITIONS CONVERSIONS NUMBER	UNIT ADDITIONS CONVERSIONS (%)
UNITED STATES	**48,992,760**	**43,130,383**	**88.0%**	**833,738**	**652,400**	**78.3%**	**181,338**	**21.7%**
NORTHEAST	**9,879,226**	**6,653,300**	**67.3%**	**161,500**	**88,291**	**54.7%**	**73,209**	**45.3%**
New England	1,816,431	1,294,821	71.3%	40,798	17,567	43.1%	23,232	56.9%
Connecticut	421,856	288,247	68.3%	10,858	6,253	57.6%	4,605	42.4%
Maine	12,028	5,398	44.9%	403	101	25.0%	302	75.0%
Massachusetts	1,108,762	785,591	70.9%	23,239	7,189	30.9%	16,049	69.1%
New Hampshire	64,228	54,430	84.7%	513	205	40.0%	308	60.0%
Rhode Island	188,363	142,078	75.4%	4,498	3,155	70.1%	1,343	29.9%
Vermont	21,196	19,075	90.0%	1,288	664	51.5%	624	48.5%
Middle Atlantic	8,062,794	5,358,479	66.5%	120,702	70,724	58.6%	49,978	41.4%
New Jersey	1,939,732	1,363,653	70.3%	48,784	31,871	65.3%	16,913	34.7%
New York	3,857,161	2,001,823	51.9%	42,221	20,092	47.6%	22,129	52.4%
Pennsylvania	2,265,901	1,993,003	88.0%	29,697	18,761	63.2%	10,936	36.8%
MIDWEST	**15,008,995**	**14,364,685**	**95.7%**	**230,087**	**189,820**	**82.5%**	**40,268**	**17.5%**
East North Central	10,833,422	10,293,098	95.0%	170,552	140,527	82.4%	30,024	17.6%
Illinois	3,222,258	2,880,621	89.4%	57,089	54,422	95.3%	2,667	4.7%
Indiana	1,281,032	1,238,498	96.7%	9,458	8,831	93.4%	627	6.6%
Michigan	2,525,908	2,491,203	98.6%	40,311	35,172	87.3%	5,139	12.7%
Ohio	2,712,708	2,668,187	98.4%	40,357	29,979	74.3%	10,378	25.7%
Wisconsin	1,091,517	1,014,589	93.0%	23,338	12,124	52.0%	11,213	48.0%
West North Central	4,175,573	4,071,587	97.5%	59,536	49,293	82.8%	10,243	17.2%
Iowa	696,342	667,887	95.9%	2,974	2,291	77.0%	684	23.0%
Kansas	735,822	730,424	99.3%	6,512	6,444	98.9%	69	1.1%
Minnesota	935,607	898,122	96.0%	26,005	19,662	75.6%	6,342	24.4%
Missouri	1,202,066	1,185,688	98.6%	15,667	15,023	95.9%	643	4.1%
Nebraska	417,874	409,186	97.9%	4,002	3,374	84.3%	629	15.7%
North Dakota	84,678	80,064	94.6%	1,993	1,011	50.8%	981	49.2%
South Dakota	103,185	100,217	97.1%	2,383	1,488	62.4%	895	37.6%
SOUTH	**12,170,885**	**10,559,046**	**86.8%**	**168,120**	**133,958**	**79.7%**	**34,162**	**20.3%**
South Atlantic	4,602,320	3,601,736	78.3%	105,605	83,297	78.9%	22,308	21.1%
Delaware	87,119	66,093	75.9%	518	463	89.4%	55	10.6%
District of Columbia	132,323	104,864	79.2%	1,310	302	23.1%	1,008	76.9%
Florida	436,984	362,988	83.1%	1,546	664	42.9%	883	57.1%
Georgia	1,314,381	1,288,481	98.0%	39,675	34,831	87.8%	4,844	12.2%
Maryland	765,453	628,432	82.1%	8,136	6,100	75.0%	2,036	25.0%
North Carolina	484,975	323,085	66.6%	19,128	11,381	59.5%	7,747	40.5%
South Carolina	318,102	53,141	16.7%	941	809	85.9%	133	14.1%
Virginia	713,197	649,653	91.1%	32,711	27,507	84.1%	5,204	15.9%
West Virginia	349,785	124,998	35.7%	1,639	1,240	75.7%	399	24.3%
East South Central	2,224,086	1,915,280	86.1%	25,130	15,834	63.0%	9,296	37.0%
Alabama	681,248	649,978	95.4%	6,752	4,256	63.0%	2,495	37.0%
Kentucky	607,493	587,678	96.7%	4,170	3,369	80.8%	801	19.2%
Mississippi	370,827	140,990	38.0%	1,391	911	65.5%	481	34.5%
Tennessee	564,517	536,634	95.1%	12,817	7,298	56.9%	5,519	43.1%
West South Central	5,344,480	5,042,030	94.3%	37,385	34,827	93.2%	2,558	6.8%
Arkansas	490,590	445,872	90.9%	3,216	3,216	100.0%	[a]	[a]
Louisiana	918,915	878,807	95.6%	1,022	726	71.0%	296	29.0%
Oklahoma	804,128	782,690	97.3%	6,669	5,879	88.1%	790	11.9%
Texas	3,130,847	2,934,660	93.7%	26,478	25,006	94.4%	1,472	5.6%
WEST	**11,933,654**	**11,553,352**	**96.8%**	**274,030**	**240,331**	**87.7%**	**33,699**	**12.3%**
Mountain	2,958,984	2,730,722	92.3%	54,686	46,432	84.9%	8,254	15.1%
Arizona	561,776	475,303	84.6%	8,045	6,498	80.8%	1,546	19.2%
Colorado	965,322	963,969	99.9%	12,798	12,403	96.9%	395	3.1%
Idaho	111,328	109,469	98.3%	4,876	2,992	61.4%	1,884	38.6%
Montana	172,742	73,052	42.3%	4,755	2,856	60.1%	1,899	39.9%
Nevada	237,583	202,857	85.4%	15,870	13,858	87.3%	2,012	12.7%
New Mexico	355,108	355,108	100.0%	518	[a]	[a]	518	100.0%
Utah	431,024	431,024	100.0%	7,625	7,625	100.0%	[a]	[a]
Wyoming	124,100	119,941	96.6%	200	200	100.0%	[a]	[a]
Pacific	8,974,670	8,822,630	98.3%	219,344	193,899	88.4%	25,445	11.6%
Alaska	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
California	8,252,370	8,151,396	98.8%	174,976	173,712	99.3%	1,264	0.7%
Hawaii	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Oregon	302,341	276,759	91.5%	9,109	4,275	46.9%	4,834	53.1%
Washington	419,959	394,475	93.9%	35,259	15,912	45.1%	19,346	54.9%

[a] Insufficient Data

Regional totals may not add due to rounding.

Househeating Conversions

In 1989, 181,338 housing units were converted from an alternative fuel to natural gas (see Table 3), an decrease of 2 percent compared with last year's level of conversions. The respondents were asked to provide a breakdown of conversions by fuel type. Based on these data, 105,854 units, or 58 percent, were conversions from fuel oil to gas. The share of fuel oil conversions has dropped from 83 percent in 1983 to 58 percent in 1989. Electricity conversions decreased in 1989 to 36,446 units. Propane conversions increased by 47 percent to 23,421. Consequently, electricity and propane accounted for 20 percent and 13 percent of total conversions, respectively, while other (coal, wood, and non-classified) increased by 11 percent to 15,617.

Figure 5 shows the trend in total conversions since 1970. Approximately 70 percent of the conversions were in four of the nine census divisions of the country--the Middle Atlantic, East North Central, South Atlantic, and New England divisions.

Table 3

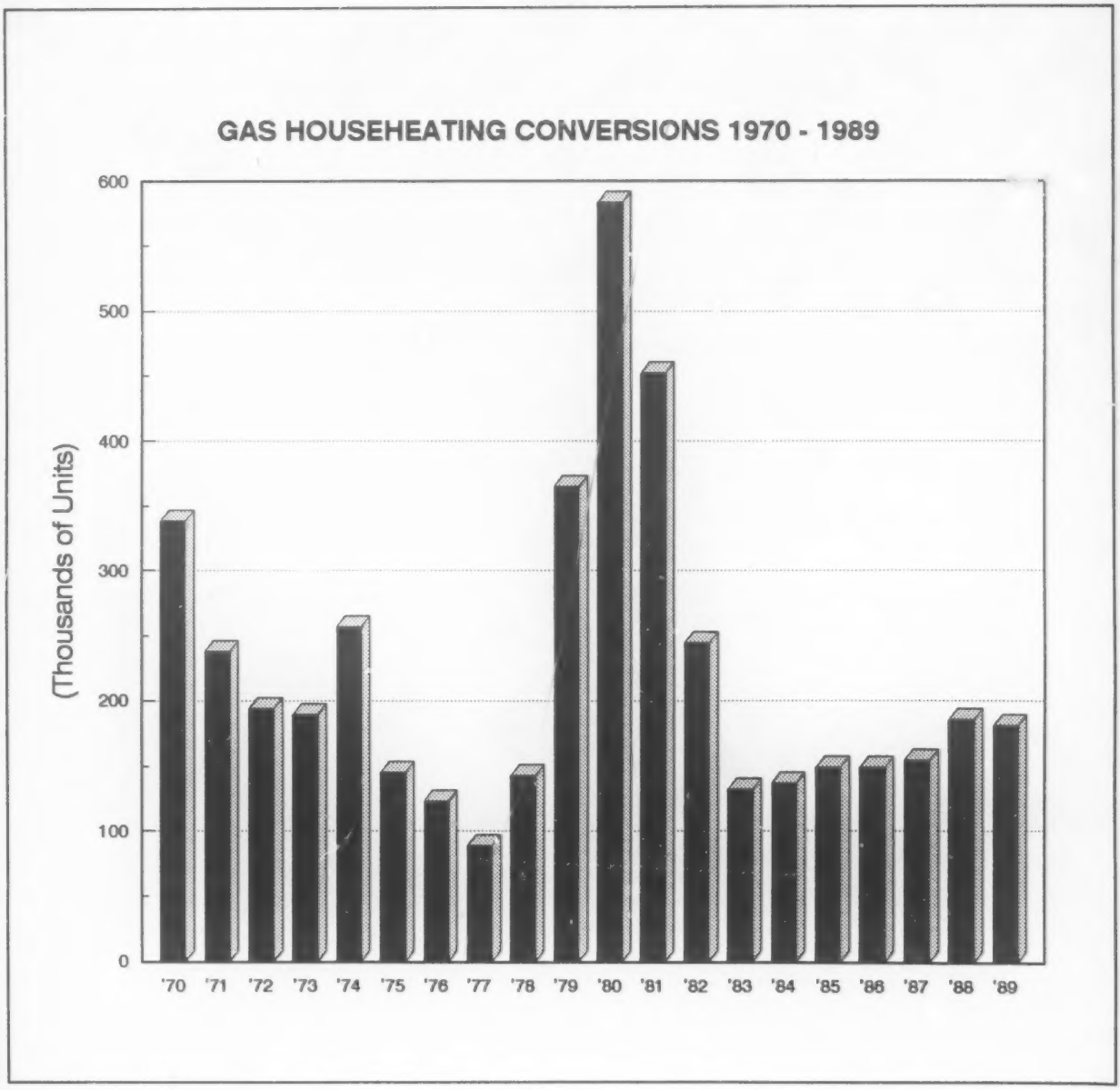
HOUSEHEATING CONVERSIONS TO NATURAL GAS IN 1989 BY TYPE OF FUEL

	OIL		PROPANE		ELECTRICITY		OTHER		TOTAL	
REGION	UNITS	%	UNITS	%	UNITS	%	UNITS	%	UNITS	%
United States	105,854	58.4	23,421	12.9	36,446	20.1	15,617	8.6	181,338	100.0
New England	21,742	93.6	565	2.4	910	3.9	15	0.1	23,232	12.8
Middle Atlantic	44,593	89.2	252	0.5	1,979	4.0	3,153	6.3	49,978	27.6
East North Central	13,671	45.5	4,774	15.9	6,310	21.0	5,269	17.6	30,024	16.6
West North Central	3,371	32.9	6,010	58.7	855	8.3	6	0.1	10,243	5.6
South Atlantic	9,978	44.7	4,689	21.0	6,148	27.6	1,494	6.7	22,308	12.3
East South Central	224	2.4	2,004	21.6	6,821	73.4	247	2.7	9,296	5.1
West South Central	0	0.0	1,301	50.8	1,240	48.5	17	0.7	2,558	1.4
Mountain	854	10.3	2,323	28.1	2,335	28.3	2,742	33.2	8,254	4.6
Pacific	11,422	44.9	1,503	5.9	9,848	38.7	2,672	10.5	25,445	14.0

[a] Other includes coal, wood, and non-classified conversions.

[b] Totals may not add due to rounding.

Figure 5


GAS HOUSEHEATING CONVERSIONS 1970 - 1989
(Thousands of Units)
600
500
400
300
200
100
0
'70
'71
'72
'73
'74
'75
'76
'77
'78
'79
'80
'81
'82
'83
'84
'85
'86
'87
'88
'89

As part of the survey, respondents were asked to project additions to the househeating inventory from both new construction and conversions for 1989 (see Table 4). The results indicate that utilities expect to add approximately 192,000 conversions, or 6 percent above the actual 1989 level. New househeating additions in 1989 are projected to be about 659,000.

Market Share

According to this year's survey, the estimated market share for gas heating (as a percentage of total estimated housing units within the service areas of responding gas utilities) ranged from less than 50 percent to over 90 percent in the various states. The estimated market share as reported by each responding gas utility can be found in Appendix 1. The map in Figure 6 shows the estimated market share in each state. Seven states had market shares over 90 percent (Alabama, Colorado, Iowa, Minnesota, Nebraska, North Dakota, and South Dakota).

Figure 6

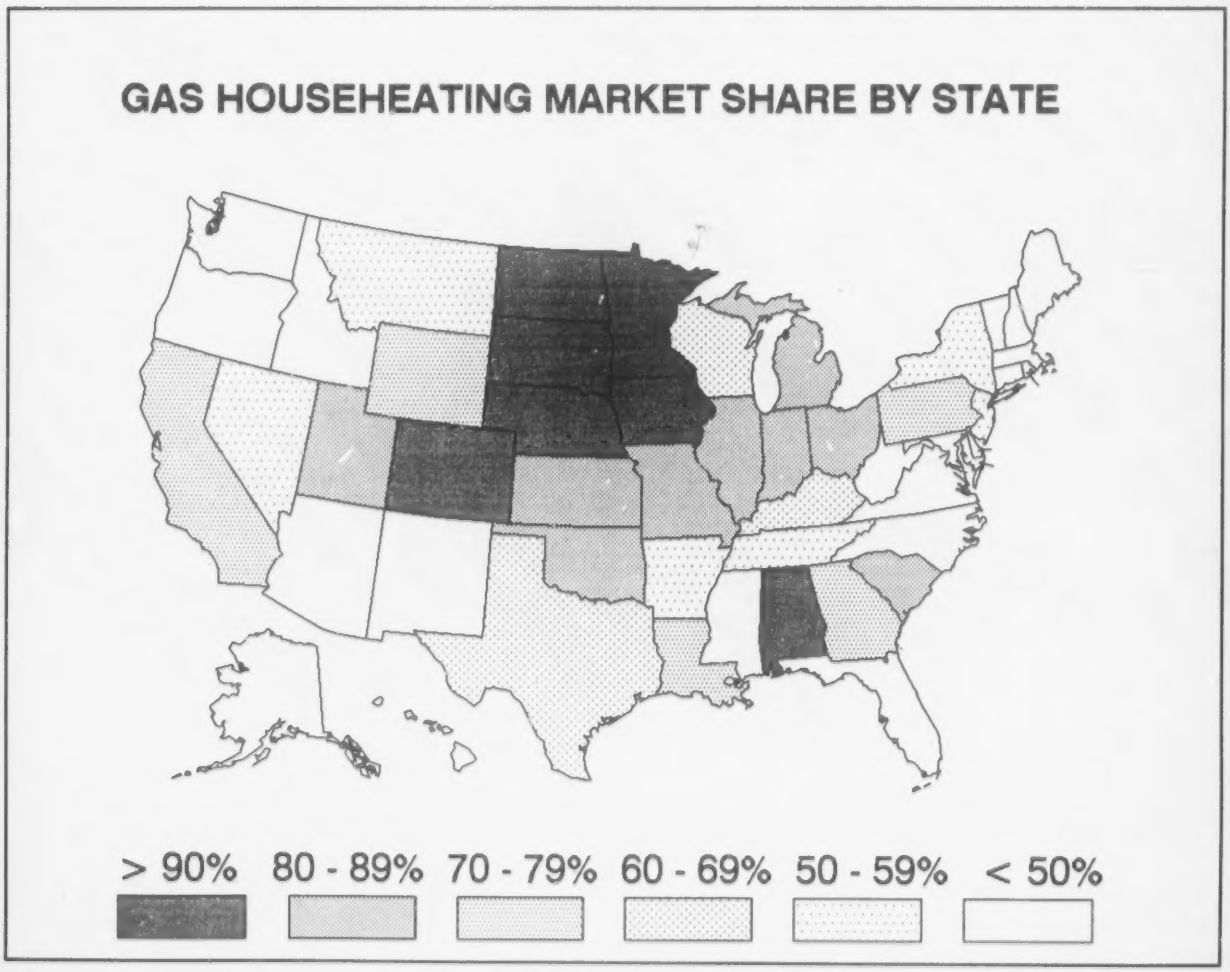


Table 4
1990 ANTICIPATED ADDITIONS
OF GAS HOUSEHEATING UNITS

Region, Division, and State	Total (100%)	New Housing Number	New Housing (%)	Conversions Number	Conversions (%)
United States	**850,837**	**658,810**	**77.4%**	**192,027**	**22.6%**
NORTHEAST	162,136	89,784	55.4%	43,766	27.0%
New England	38,707	14,789	38.2%	23,918	61.8%
Connecticut	9,655	5,022	52.0%	4,633	48.0%
Maine	404	101	25.0%	303	75.0%
Massachusetts	23,043	6,626	28.8%	16,418	71.2%
New Hampshire	515	206	40.0%	309	60.0%
Rhode Island	3,535	2,295	64.9%	1,240	35.1%
Vermont	1,555	540	34.7%	1,015	65.3%
Middle Atlantic	123,429	74,994	60.8%	48,435	39.2%
New Jersey	53,511	36,316	67.9%	17,195	32.1%
New York	39,657	19,808	49.9%	19,849	50.1%
Pennsylvania	30,261	18,870	62.4%	11,391	37.6%
NORTH CENTRAL	217,195	181,900	83.7%	26,054	12.0%
East North Central	160,105	134,134	83.8%	25,970	16.2%
Illinois	52,136	49,572	95.1%	2,564	4.9%
Indiana	8,978	8,348	93.0%	630	7.0%
Michigan	39,227	34,594	88.2%	4,633	11.8%
Ohio	35,739	27,209	76.1%	8,529	23.9%
Wisconsin	24,024	14,411	60.0%	9,614	40.0%
West North Central	57,090	47,765	83.7%	9,325	16.3%
Iowa	2,741	2,076	75.7%	666	24.3%
Kansas	6,266	6,182	98.7%	84	1.3%
Minnesota	23,165	18,154	78.4%	5,011	21.6%
Missouri	15,690	15,015	95.7%	676	4.3%
Nebraska	4,652	3,834	82.4%	818	17.6%
North Dakota	2,176	987	45.4%	1,189	54.6%
South Dakota	2,400	1,519	63.3%	882	36.7%
SOUTH	180,060	143,190	79.5%	26,349	14.6%
South Atlantic	113,216	89,303	78.9%	23,914	21.1%
Delaware	[a]	[a]	[a]	[a]	[a]
District of Columbia	1,465	404	27.6%	1,061	72.4%
Florida	1,499	530	35.4%	969	64.6%
Georgia	41,176	35,775	86.9%	5,401	13.1%
Maryland	11,124	8,882	79.8%	2,242	20.2%
North Carolina	21,059	12,831	60.9%	8,228	39.1%
South Carolina	1,488	1,303	87.5%	185	12.5%
Virginia	33,755	28,327	83.9%	5,428	16.1%
West Virginia	1,650	1,250	75.8%	400	24.2%
East South Central	25,182	15,507	61.6%	9,675	38.4%
Alabama	6,640	3,822	57.6%	2,818	42.4%
Kentucky	4,305	3,180	73.9%	1,125	26.1%
Mississippi	1,091	788	72.2%	303	27.8%
Tennessee	13,146	7,718	58.7%	5,429	41.3%
West South Central	41,661	38,380	92.1%	3,281	7.9%
Arkansas	3,209	3,209	100.0%	[a]	[a]
Louisiana	1,188	838	70.5%	350	29.5%
Oklahoma	8,632	7,011	81.2%	1,621	18.8%
Texas	28,632	27,322	95.4%	1,310	4.6%
WEST	291,446	243,936	83.7%	17,053	5.9%
Mountain	63,017	47,301	75.1%	15,716	24.9%
Arizona	14,524	7,656	52.7%	6,868	47.3%
Colorado	11,498	10,942	95.2%	556	4.8%
Idaho	5,132	3,082	60.0%	2,051	40.0%
Montana	6,464	2,641	40.9%	3,823	59.1%
Nevada	17,338	14,919	86.0%	2,419	14.0%
New Mexico	[a]	[a]	[a]	[a]	[a]
Utah	7,855	7,855	100.0%	[a]	[a]
Wyoming	206	206	100.0%	[a]	[a]
Pacific	228,428	196,635	86.1%	31,793	13.9%
Alaska	[a]	[a]	[a]	[a]	[a]
California	170,681	169,344	99.2%	1,336	0.8%
Hawaii	[a]	[a]	[a]	[a]	[a]
Oregon	12,704	5,854	46.1%	6,849	53.9%
Washington	45,044	21,437	47.6%	23,607	52.4%

[a] Insufficient data.

IV. Residential Gas Consumption

Gas Consumption Per Unit

Respondents to the survey estimated the average annual gas consumption for both single and multi-family dwellings. Utilities representing 87 percent of all gas househeating customers responded to this portion in the survey. These responses were then used to develop the U.S. and regional average estimates on per unit gas use. Both categories were weighted by the number of residential gas customers for each responding utility in each state. In addition, the multi-family data represented a weighted average of dwellings with 2-4 units, and dwellings with 5 or more units (see Table 5).

Due to changes in the reporting methods of some utilities, particularly in the definition of base load and multi-family gas use and consumption per unit (as well as annual changes in heating degree day totals), consumption data from year to year are not always comparable. With this caveat in mind, a review of 1989 combined average consumption data (U.S. average weighted by customer and dwelling type) indicated that total per unit gas consumption was 88.0 Mcf for all units, while househeating was 58.9 Mcf and base load consumption was 29.1 Mcf. This represents a 1.2 percent increase over last year for househeating, which is consistent with the fact that heating degree days were up nationally for 1989, by 8.4 percent. In single-family dwellings, gas consumption for househeating was 77.2 Mcf, while base load consumption was 33.6 Mcf. By comparison the average multi-family dwelling unit in buildings with 2-4 units consumed 50.3 Mcf and 26.7 Mcf, respectively, for househeating and base load use. In dwellings with more than 5 units, gas consumption per unit for househeating was 41.4 Mcf and base load consumption per unit was 25.1 Mcf.

Table 5 includes weather data for each region in the form of annual heating degree days for calendar year 1989 and the 30-year normal heating degree days. The degree-day data are weighted by gas househeating customers.

Table 5

1989 AVERAGE GAS CONSUMPTION/UNIT[a] BY REGION (Mcf)

Region	Single-Family	Multi-Family 2-4 Units	Multi-Family 5+ Units	Combined[b] Average	Heating Degree Days[c] 1989	Heating Degree Days[c] 30-Year
Northeast						
Heating	104.6	71.4	58.9	86.5	5,818	5,619
Baseload	41.7	32.4	28.5	35.8		
Total	**146.3**	**103.8**	**87.4**	**122.3**		
Midwest						
Heating	110.0	75.4	68.2	87.9	7,042	6,681
Baseload	36.5	25.5	24.8	29.9		
Total	**146.5**	**100.9**	**93.0**	**117.8**		
South						
Heating	55.4	41.9	37.7	46.1	2,939	2,987
Baseload	30.6	28.1	26.7	28.7		
Total	**86.0**	**70.0**	**64.4**	**74.8**		
West						
Heating	44.0	24.8	19.4	30.1	2,695	2,778
Baseload	27.4	23.7	22.6	24.7		
Total	**71.4**	**48.5**	**42.0**	**54.8**		
U.S. Average						
Heating	77.2	50.3	41.4	58.9	4,614	4,566
Baseload	33.6	26.7	25.1	29.1		
Total	**110.8**	**77.0**	**66.5**	**88.0**		

[a]Results for 1989 are based on responses from 171 different markets.

[b]Weighted by customer and dwelling type.

[c]Calendar year heating days as reported are then weighted by gas householding customers (see Appendix 1 for detailed definitions). The 30-year normal are also weighted by gas householding customers as opposed to total population.

Conservation

Conservation, measured as the total percentage decline in consumption per househeating customer not explained by the weather, has reduced consumption to an average of 27.0 percent below the pre-1973 level. This is below the 1988 level and consistent with higher consumption per unit over 1988. Conservation percentages reported by each company were weighted by househeating customer data from each company to derive regional and national conservation estimates. The magnitude of conservation ranged from a high of 37.3 percent below the pre-1973 level of consumption in the Pacific division to a low of 17.9 percent in the New England division (see Table 6).

Prices

Natural gas prices increased in six of the nine census divisions in 1989. The largest increase, depicted in Table 7, was registered in the Pacific. Overall, the average U.S. gas price increased from $5.31/MMBtu to $5.41/MMBtu or 1.9 percent. Fuel oil prices showed an increase of 20.3%, to $6.21/MMBtu. Propane prices also increased by 20.7% to $10.19/MMBtu.

Table 6

1989 AVERAGE CONSERVATION BY REGION

(Percent Decline from 1973 Baseline)

Region	Conservation (%) [a]
NORTHEAST	24.1%
New England	21.1%
Middle Atlantic	24.9%
MIDWEST	27.2%
East North Central	27.1%
West North Central	27.4%
SOUTH	20.0%
South Atlantic	22.6%
East South Central	17.9%
West South Central	31.5%
WEST	36.1%
Mountain	31.5%
Pacific	37.3%
UNITED STATES	27.0%

[a] The total percent decline in consumption normalized for weather from the pre-embargo 1973 baseline. Results for 1989 are based on individual company responses fromm 118 different markets and are weighted by househeating customers.

Table 7

RESIDENTIAL FUEL PRICE COMPARISONS [a]
($/MMBtu)

DIVISION	1988	1989	% Change
United States			
Gas	5.31	5.41	1.9%
Electricity	21.26	23.10	8.7%
Propane	8.44	10.19	20.7%
Fuel Oil	5.16	6.21	20.3%
New England			
Gas	6.85	7.11	3.9%
Electricity	23.64	23.48	-0.7%
Propane	10.72	12.20	13.7%
Fuel Oil	5.50	8.21	49.3%
Middle Atlantic			
Gas	5.91	6.15	4.1%
Electricity	22.13	27.62	24.8%
Propane	10.03	12.57	25.3%
Fuel Oil	5.65	6.62	17.1%
East North Central			
Gas	5.26	5.01	-4.8%
Electricity	19.78	20.22	2.2%
Propane	7.76	9.90	27.6%
Fuel Oil	5.40	6.13	13.5%
West North Central			
Gas	4.46	4.45	-0.4%
Electricity	18.75	19.34	3.1%
Propane	6.45	9.14	41.8%
Fuel Oil	4.28	5.54	29.5%
South Atlantic			
Gas	6.24	6.06	-2.8%
Electricity	18.68	19.26	3.1%
Propane	9.50	11.78	24.0%
Fuel Oil	5.29	6.50	22.8%
East South Central			
Gas	4.75	5.00	5.2%
Electricity	16.66	16.75	0.6%
Propane	8.71	11.46	31.6%
Fuel Oil	5.11	7.33	43.4%
West South Central			
Gas	5.13	5.22	1.7%
Electricity	18.55	18.05	-2.7%
Propane	7.93	8.01	0.9%
Fuel Oil	4.58	5.13	11.9%
Mountain			
Gas	5.19	5.47	5.3%
Electricity	22.35	22.33	-0.1%
Propane	6.55	8.62	31.6%
Fuel Oil	3.97	4.98	25.5%
Pacific			
Gas	5.04	5.49	8.9%
Electricity	25.96	30.07	15.8%
Propane	10.14	10.25	1.1%
Fuel Oil	5.76	6.26	8.7%

[a] Represents final, year end price to consumers, including sales taxes. Weighted by househeating customers.

Heating Bills

Strongly correlated with the natural gas price is the annual gas househeating bill for a single-family home shown in Table 8. This measure increased in six of the nine divisions. These increases ranged from 1.5 percent in the West North Central division to 18.2 percent in the New England Division. Nationally, the average gas househeating bill only increased from $392 to $394 or about 0.4 percent.

Table 8

1988 AND 1989 GAS HOUSEHEATING BILLS BY DIVISION [a]

Division	1988 Gas Heating Bills	1989 Gas Heating Bills	% Change
United States	$391.88	$393.59	0.4%
New England	$584.31	$690.70	18.2%
Middle Atlantic	$609.32	$652.26	7.0%
East North Central	$534.94	$488.40	-8.7%
West North Central	$389.36	$395.15	1.5%
South Atlantic	$365.04	$382.83	4.9%
East South Central	$329.18	$314.31	-4.5%
West South Central	$238.03	$230.99	-3.0%
Mountain	$296.35	$317.21	7.0%
Pacific	$203.11	$213.44	5.1%

[a] Weighted by househeating customers.

V. Marketing Activity Survey

Residential Appliance Marketing Programs

A.G.A. conducts a biennial survey on gas utility residential marketing activity. This year the survey was performed by A.G.A. and it was decided to show highlights of the results in this report as part of the expanded coverage in the Residential Gas Market Survey. In the residential market, more than half of the 80 companies reporting offered some type of appliance marketing program. Of these companies, about 50 percent sell appliances and over 60 percent offer customer rebates on new appliance purchases. Water heaters received the most support. With respect to trade support, 60 to 70 percent of the companies offered programs to appliance dealers, HVAC contractors, and builders. Co-op advertising was the chief form of trade support.

Table 9

GAS UTILITY RESIDENTIAL MARKETING (PERCENT OFFERING)

	SELL GAS OR ELECTRIC APPLIANCES	OFFER GAS APPLIANCE SERVICING	SELL SERVICE CONTRACT	OFFER APPLIANCE FINANCING	LEASE DOM. GAS APPLIANCE	OFFER CUSTOMER REBATES
CUSTOMER PROGRAMS	48.8%	66.3%	32.5%	51.2%	15.0%	61.3%
IF OFFERED, FOR WHICH APPLIANCES?						
a. WATER HEATERS	76.9%	86.8%	73.1%	82.9%	91.7%	85.7%
b. RANGES	56.4%	84.9%	30.8%	53.7%	16.7%	32.7%
c. CLOTHES DRYERS	61.5%	84.9%	34.6%	56.1%	16.7%	28.6%
d. GRILLS	69.2%	75.5%	23.1%	58.5%	8.3%	12.2%
e. GAS FIREPLACES/LOG	61.5%	69.8%	15.4%	51.2%	8.3%	26.5%
f. GAS LIGHTS	66.7%	77.4%	19.2%	58.5%	8.3%	26.5%
g. SPACE HEATERS	64.1%	77.4%	46.2%	68.3%	8.3%	28.6%
h. FURNACES	38.5%	73.6%	84.6%	70.7%	8.3%	57.1%
i. BOILERS	33.3%	58.5%	57.7%	58.5%	8.3%	32.7%
j. GAS A/C	25.6%	54.7%	7.7%	29.3%	0.0%	14.3%
k. STANDBY GEN.	25.6%	37.7%	15.4%	26.8%	8.3%	4.1%
l. POOL/SPA HEATERS	12.8%	26.4%	19.2%	19.5%	16.7%	8.2%
m. OTHER	12.8%	11.3%	19.2%	17.1%	25.0%	10.2%

	APPLIANCE DEALER	HVAC CONTRACTOR	BUILDER
TRADE SUPPORT	58.8%	69.6%	69.6%
IF OFFERED, WHAT TYPE OF SUPPORT?			
a. POINT OF PURCHASE LITERATURE	68.1%	58.2%	63.6%
b. POINT OF PURCHASE DISPLAYS	53.2%	32.7%	47.3%
c. UTILITY PERSONNEL FOR DEMOS	21.3%	10.9%	29.1%
d. INCENTIVE PROGRAMS	46.8%	49.1%	56.4%
e. SALES/SERVICE TRAINING	42.6%	56.4%	34.5%
f. INSTITUTIONAL ADVERTISING	34.0%	41.8%	45.5%
g. CO-OP ADVERTISING	83.0%	80.0%	67.3%
h. LEADS/REFERALS	34.0%	54.5%	25.5%
i. MODEL HOME MATERIALS/DEMOS	8.5%	14.5%	69.1%
j. OTHER	4.3%	5.5%	9.1%

APPENDIX 1 — CUSTOMERS AND CONSUMPTION

DIVISION / STATE / COMPANY	RESIDENTIAL CUSTOMERS YEAR-END 1989	HOUSEHEATING CUSTOMERS YEAR-END 1989	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) HEATING	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) BASELOAD	GAS-HTG MKT-SHARE VS. ALL FUELS	HEATING DEGREE DAYS 1989	HEATING DEGREE DAYS 30 YEAR NORMAL
NEW ENGLAND							
CONNECTICUT							
CONNECTICUT NATURAL GAS CORP.	127,160	NA	NA	NA	43.0%	6,185	5,680
SOUTHERN CONNECTICUT GAS CO.	138,096	86,592	84.9	25.4	27.0%	5,744	5,501
YANKEE GAS SERVICES CO.	156,600	106,000	90.6	39.2	24.0%	6,057	6,135
MAINE							
NORTHERN UTILITIES	12,700	5,700	89.0	36.0	5.0%	8,280	8,099
MASSACHUSETTS							
BAY STATE GAS COMPANY	210,800	164,800	89.0	36.0	38.0%	7,332	6,919
BERKSHIRE GAS COMPANY	30,250	18,953	120.0	30.0	NA	7,677	7,492
BOSTON GAS CO.	462,784	257,607	106.0	36.0	38.0%	5,964	5,634
COLONIAL GAS CO. - CAPE COD	49,043	44,913	85.0	35.0	34.7%	6,600	6,412
COLONIAL GAS CO. - LOWELL	57,014	52,534	94.0	46.0	56.0%	6,878	6,448
COMMONWEALTH GAS CO.	204,158	170,819	120.0	30.0	42.0%	6,890	6,533
ESSEX COUNTY GAS CO	32,941	25,486	84.0	31.0	55.0%	6,858	6,998
FALL RIVER GAS CO.	40,146	35,107	100.0	35.0	NA	6,085	6,069
NEW HAMPSHIRE							
NORTHERN UTILITIES	11,800	10,000	89.0	36.0	15.0%	7,396	7,266
RHODE ISLAND							
PROVIDENCE GAS CO.	135,975	102,777	91.2	33.6	45.4%	5,882	5,897
VERMONT							
VERMONT GAS SYSTEMS	17,873	16,085	100.0	30.0	NA	7,588	7,876
MIDDLE ATLANTIC							
NEW JERSEY							
ELIZABETHTOWN GAS CO.	206,746	136,409	91.0	43.0	60.0%	4,859	4,999
NEW JERSEY NATURAL GAS COMPAN	280,654	248,280	95.7	33.9	40.0%	5,204	5,222
PUBLIC SERVICE ELECTRIC & GAS	1,268,323	824,401	99.0	NA	65.0%	4,950	4,966
SOUTH JERSEY GAS CO.	195,398	162,569	75.7	29.2	50.0%	4,786	4,578
NEW YORK							
BROOKLYN UNION GAS CO.	1,067,676	379,130	97.0	45.0	52.0%	4,718	4,900
CENTRAL HUDSON GAS & ELECTRIC	48,790	35,458	61.0	50.0	16.3%	6,511	6,378
COLUMBIA GAS OF NEW YORK	61,428	56,693	104.6	27.8	78.7%	7,636	7,299
CONSOLIDATED EDISON CO.	1,028,000	193,842	125.0	83.0	40.0%	4,500	NA
LONG ISLAND LIGHTING CO.	386,810	204,982	156.2	19.5	23.0%	5,169	5,333
NATIONAL FUEL GAS DIST.	475,110	457,207	133.9	34.4	84.1%	7,150	6,753
NIAGARA MOHAWK POWER CO.	429,162	351,796	98.0	44.0	60.0%	7,134	6,844
ORANGE & ROCKLAND UTILITIES	94,085	89,041	111.0	44.0	57.0%	5,733	5,947
ROCHESTER GAS & ELECTRIC	238,441	215,120	95.9	34.4	NA	7,109	6,713
ST. LAWRENCE GAS CO.	10,585	9,693	140.0	26.0	76.0%	8,759	8,318
PENNSYLVANIA							
COLUMBIA GAS OF PA	314,666	300,469	103.9	26.0	68.5%	5,919	5,720
EQUITABLE RESOURCES	231,386	235,209	100.0	39.0	97.0%	6,112	5,950
NATIONAL FUEL GAS DIST.	188,404	186,266	137.1	33.4	74.5%	6,503	6,543
NORTH PENN GAS CO.	29,341	29,249	90.0	34.0	NA	7,689	7,366
PENNSYLVANIA GAS & WATER	115,920	96,730	155.7	24.4	60.0%	6,515	6,301
PEOPLES NATURAL GAS CO.	307,803	301,123	72.0	38.0	97.8%	5,676	5,699
PHILADELPHIA ELECTRIC CO.	311,820	246,270	90.0	30.0	33.1%	5,074	4,955
PHILADELPHIA GAS WORKS	507,352	409,508	125.0	43.0	90.0%	4,831	4,600
PIKE COUNTY LIGHT & POWER	925	869	95.0	43.0	29.0%	5,733	5,947
UGI CORPORATION	197,506	133,852	81.2	29.6	25.6%	5,618	5,480
EAST NORTH CENTRAL							
ILLINOIS							
IOWA-ILLINOIS GAS & ELECTRIC	58,260	56,216	84.1	35.3	78.0%	6,469	6,274
NORTHERN ILLINOIS GAS CO.	1,496,933	1,441,304	126.0	31.0	87.0%	6,313	6,177
PEOPLES GAS LIGHT & COKE	802,662	575,165	148.0	33.0	93.0%	6,758	6,455
ILLINOIS POWER CO.	353,007	344,634	77.2	27.6	84.0%	5,440	5,519
UNITED CITIES GAS CO.	19,357	18,390	NA	NA	NA	6,022	5,654
NORTH SHORE GAS CO.	109,619	103,038	140.0	42.0	93.0%	6,758	6,455
INDIANA							
NORTHERN INDIANA PUBLIC SERV.	538,074	513,653	NA	NA	90.0%	6,180	6,371
KOKOMO GAS & FUEL CO.	27,343	27,037	97.3	21.7	80.0%	6,288	5,888

APPENDIX 1 -- CUSTOMERS AND CONSUMPTION

DIVISION / STATE / COMPANY	RESIDENTIAL CUSTOMERS YEAR-END 1989	HOUSEHEATING CUSTOMERS YEAR-END 1989	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) HEATING	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) BASELOAD	GAS-HTG MKT-SHARE VS. ALL FUELS	HEATING DEGREE DAYS 1989	HEATING DEGREE DAYS 30 YEAR NORMAL
OHIO VALLEY GAS CORP.	22,711	22,368	105.0	26.0	70.0%	5,883	5,801
LAWRENCEBURG GAS CO.	3,915	3,791	100.0	40.0	63.0%	5,316	5,247
CITIZENS GAS & COKE UTILITY	215,632	208,211	91.0	35.0	75.0%	5,846	5,577
MICHIGAN							
CONSUMERS POWER CO.	1,241,173	1,241,173	85.8	42.1	91.0%	7,452	6,987
MICHIGAN GAS CO.	72,761	71,671	126.0	38.0	70.0%	7,417	7,216
WISCONSIN PUBLIC SERVICE	4,558	4,300	87.0	33.0	NA	8,336	8,022
BATTLE CREEK GAS COMPANY	30,608	29,256	138.0	36.0	NA	6,131	6,378
MICHIGAN CONSOLIDATED GAS	1,014,283	984,411	110.0	45.0	85.0%	7,092	6,816
MICHIGAN GAS UTILITIES CO.	109,200	107,800	97.0	26.0	63.0%	6,730	6,573
OHIO							
COLUMBIA GAS OF OHIO	1,069,671	1,059,025	101.2	25.3	74.6%	6,118	5,873
CINCINNATI GAS & ELECTRIC	287,578	266,110	100.0	40.0	58.0%	5,316	5,247
EAST OHIO GAS CO.	962,249	953,271	105.0	42.0	98.0%	6,271	6,274
DAYTON POWER & LIGHT	253,798	250,841	88.1	30.3	NA	6,008	5,744
WEST OHIO GAS CO.	52,232	51,402	95.8	24.2	86.1%	6,130	5,910
OHIO GAS CO.	30,127	30,127	85.0	35.0	75.0%	6,759	6,360
WISCONSIN							
WISCONSIN SOUTHERN GAS CO.	39,125	38,008	89.7	27.6	70.0%	7,134	7,137
WISCONSIN PUBLIC SERVICE	152,957	146,447	87.0	33.0	NA	8,336	8,022
WISCONSIN GAS CO.	409,977	370,663	95.0	31.0	78.0%	7,382	7,263
MADISON GAS & ELECTRIC	75,051	69,475	85.6	27.8	76.9%	7,784	7,642
WISCONSIN FUEL & LIGHT CO.	37,924	36,421	98.6	26.0	75.0%	8,505	8,146
WISCONSIN NATURAL GAS CO.	229,628	217,062	104.6	21.5	69.0%	7,594	7,457
WEST NORTH CENTRAL							
IOWA							
CEDAR FALLS UTILITIES	9,225	9,225	116.8	NA	78.0%	7,017	6,122
IOWA PUBLIC SERVICE CO.	239,821	226,470	112.5	29.6	NA	7,169	6,554
IOWA-ILLINOIS GAS & ELECTRIC	151,778	147,467	79.3	33.4	86.0%	6,469	6,274
PEOPLES NATURAL GAS (UTILICORP)	105,577	100,298	NA	NA	NA	NA	NA
UNITED CITIES GAS CO.	4,075	4,050	NA	NA	NA	6,022	5,654
KANSAS							
ARKANSAS LOUISIANA GAS CO.	19,362	16,942	52.8	31.8	84.0%	4,857	4,787
K N ENERGY, INC.	22,891	22,433	76.0	37.0	NA	6,048	5,469
MIDWEST ENERGY, INC.	9,103	9,103	93.5	30.8	90.0%	5,541	5,300
PEOPLES NATURAL GAS (UTILICORP)	31,664	30,081	NA	NA	NA	NA	NA
MINNESOTA							
CITY OF DULUTH	19,881	14,088	140.0	45.0	85.0%	10,308	9,839
IOWA PUBLIC SERVICE CO.	61,606	61,515	112.9	29.5	NA	8,145	8,007
MINNEGASCO, INC.	438,724	429,705	130.0	35.0	82.0%	8,256	8,108
NORTHERN STATES POWER CO.	245,760	230,490	113.1	16.5	NA	8,310	8,007
PEOPLES NATURAL GAS (UTILICORP)	87,050	82,698	NA	NA	NA	NA	NA
MISSOURI							
ASSOCIATED NATURAL GAS CO.	38,189	38,189	64.0	23.0	49.0%	3,848	3,937
CITY OF SPRINGFIELD	56,303	56,303	76.0	26.0	88.0%	5,000	4,660
LACLEDE GAS CO.	555,847	541,251	72.2	41.2	80.0%	4,862	4,938
ST. JOSEPH LIGHT & POWER CO.	5,248	5,193	NA	NA	NA	5,767	5,453
UNITED CITIES GAS CO.	12,000	11,950	NA	NA	NA	6,022	5,654
NEBRASKA							
HASTINGS UTILITIES	8,705	8,168	103.6	NA	99.0%	6,034	5,905
IOWA PUBLIC SERVICE CO.	3,527	3,390	79.9	29.4	NA	7,132	6,947
K N ENERGY, INC.	78,953	77,374	76.0	30.0	NA	6,893	6,612
METROPOLITAN UTILITIES DIST.	134,020	131,318	80.0	38.0	85.0%	6,514	6,592
MINNEGASCO, INC.	108,864	107,304	66.0	30.0	94.0%	6,536	6,093
NORTHWESTERN PUBLIC SERVICE	32,820	32,553	78.0	39.0	99.0%	6,566	6,638
PEOPLES NATURAL GAS (UTILICORP)	31,169	29,611	NA	NA	NA	NA	NA
NORTH DAKOTA							
MONTANA-DAKOTA UTILITIES CO.	63,093	61,453	85.3	33.5	97.4%	9,086	9,075
NORTHERN STATES POWER CO.	21,093	18,146	103.8	18.9	NA	NA	9,323
SOUTH DAKOTA							
IOWA PUBLIC SERVICE CO.	7,492	7,061	113.0	26.8	NA	7,132	7,885

APPENDIX 1 -- CUSTOMERS AND CONSUMPTION

DIVISION / STATE / COMPANY	RESIDENTIAL CUSTOMERS YEAR-END 1989	HOUSEHEATING CUSTOMERS YEAR-END 1989	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) HEATING	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) BASELOAD	GAS-HTG MKT-SHARE VS. ALL FUELS	HEATING DEGREE DAYS 1989	HEATING DEGREE DAYS 30 YEAR NORMAL
MINNEGASCO, INC.	37,639	37,405	81.0	32.0	90.0%	8,002	7,816
MONTANA-DAKOTA UTILITIES CO.	27,583	25,983	61.3	33.8	94.2%	7,529	7,301
NORTHWESTERN PUBLIC SERVICE	26,023	25,448	88.0	29.4	99.0%	8,217	8,087
SOUTH ATLANTIC							
DELAWARE							
CHESAPEAKE UTILITIES CORP.	10,992	8,425	99.0	28.0	NA	5,124	5,117
DELMARVA POWER & LIGHT CO.	77,021	58,346	110.2	27.1	37.3%	5,130	4,947
DISTRICT OF COLUMBIA							
WASHINGTON GAS LIGHT CO.	133,446	105,754	86.0	33.0	73.0%	4,138	3,874
FLORIDA							
PEOPLES GAS SYSTEM, INC.	151,352	125,723	27.0	25.0	40.0%	124	185
GEORGIA							
ATLANTA GAS LIGHT COMPANY	1,072,524	1,056,436	48.8	31.2	73.5%	2,520	3,026
UNITED CITIES GAS CO.	62,681	56,400	NA	NA	NA	2,478	2,689
MARYLAND							
BALTIMORE GAS & ELECTRIC	482,538	357,418	83.9	39.3	39.7%	4,906	4,706
COLUMBIA GAS OF MD	26,425	23,146	92.5	20.3	45.0%	5,304	5,066
WASHINGTON GAS LIGHT CO.	242,205	236,140	82.8	31.6	65.0%	4,384	3,898
NORTH CAROLINA							
CITY OF WILSON	6,435	6,435	66.2	3.6	24.5%	90	NA
NORTH CAROLINA NATURAL GAS	66,446	64,147	62.0	33.0	77.0%	2,850	2,750
PIEDMONT NATURAL GAS CO.	197,517	56,183	77.6	15.9	NA	3,694	3,700
PUBLIC SERVICE OF NC	199,920	186,556	82.5	23.8	30.5%	3,415	3,339
SOUTH CAROLINA							
PEOPLES NATURAL GAS CO. OF S.C.	8,084	6,425	NA	NA	NA	2,719	2,801
PIEDMONT NATURAL GAS CO.	57,696	25,631	71.8	29.0	NA	3,426	3,411
SOUTH CAROLINA ELECTRIC & GAS	186,519	NA	NA	NA	88.4%	2,098	2,384
UNITED CITIES GAS CO.	3,907	3,500	NA	NA	NA	3,144	3,239
VIRGINIA							
COMMONWEALTH GAS SERVICES	113,297	107,617	77.5	21.9	37.8%	4,084	3,906
ROANOKE GAS CO.	34,644	34,644	NA	NA	NA	4,007	4,274
UNITED CITIES GAS CO.	10,434	9,450	NA	NA	NA	4,487	4,315
VIRGINIA NATURAL GAS	174,306	149,023	47.0	42.0	41.0%	3,496	3,561
WASHINGTON GAS LIGHT CO.	205,868	197,212	75.0	28.1	55.0%	4,384	3,898
WEST VIRGINIA							
HOPE GAS CO.	100,644	100,529	76.0	30.3	NA	5,538	4,957
EAST SOUTH CENTRAL							
ALABAMA							
ALABAMA GAS CORP.	402,107	380,811	49.8	27.6	72.0%	2,443	2,590
CITY OF FLORENCE	9,356	9,356	NA	NA	48.0%	2,775	NA
DECATUR UTILITIES	5,307	5,132	49.0	11.0	30.0%	3,352	3,302
HUNTSVILLE UTILITIES GAS DEPT.	25,805	25,805	100.0	NA	66.0%	3,799	3,341
KENTUCKY							
COLUMBIA GAS OF KY	108,550	107,938	87.8	20.6	70.5%	4,794	4,624
DELTA NATURAL GAS CO.	25,830	24,539	65.0	25.0	NA	4,963	4,787
LOUISVILLE GAS & ELECTRIC	223,745	222,079	71.0	33.0	78.0%	4,584	4,525
UNION LIGHT, HEAT & POWER	59,245	55,411	100.0	40.0	64.0%	5,316	5,247
MISSISSIPPI							
ENTEX, INC.	98,308	98,219	41.0	27.0	92.0%	2,467	2,450
MISSISSIPPI VALLEY GAS CO.	206,465	176,570	44.9	30.0	92.0%	2,611	2,774
TENNESSEE							
KNOXVILLE UTILITIES BOARD	31,464	26,117	NA	NA	NA	3,859	3,658
MEMPHIS LIGHT, GAS & WATER	240,909	233,681	83.0	30.0	76.0%	2,960	3,227
MIDDLE TENNESSEE NATURAL GAS	17,710	16,938	56.0	13.0	32.8%	3,801	3,756
NASHVILLE GAS CO.	75,000	72,895	85.0	30.0	34.0%	1,503	3,756
UNITED CITIES GAS CO.	55,313	50,000	NA	NA	NA	4,012	3,923
WEST SOUTH CENTRAL							
ARKANSAS							
ARKANSAS LOUISIANA GAS CO.	366,263	320,481	52.2	31.4	57.0%	3,247	3,152
ARKANSAS OKLAHOMA GAS CORP.	34,868	34,868	65.0	32.0	NA	3,600	3,477
ARKANSAS WESTERN GAS CO.	71,080	72,202	68.0	32.0	45.0%	4,961	3,948

APPENDIX I -- CUSTOMERS AND CONSUMPTION

DIVISION / STATE / COMPANY	RESIDENTIAL CUSTOMERS YEAR-END 1989	HOUSEHEATING CUSTOMERS YEAR-END 1989	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) HEATING	BASELOAD	GAS-HTG MKT-SHARE VS. ALL FUELS	HEATING DEGREE DAYS 1989	30 YEAR NORMAL
ASSOCIATED NATURAL GAS CO.	17,748	17,748	63.0	22.0	56.0%	3,848	3,937
LOUISIANA							
ARKANSAS LOUISIANA GAS CO.	124,982	109,360	46.1	27.7	64.0%	2,432	2,269
ENTEX, INC.	117,477	105,885	35.0	24.0	70.0%	1,277	1,619
LOUISIANA GAS SERVICE CO.	221,510	221,510	28.2	27.0	NA	1,535	1,471
NEW ORLEANS PUBLIC SERVICE	145,899	145,899	27.0	33.0	85.3%	1,303	1,265
OKLAHOMA							
ARKANSAS LOUISIANA GAS CO.	103,898	90,911	47.9	28.9	54.0%	3,777	3,755
ARKANSAS OKLAHOMA GAS CORP.	13,585	13,585	51.4	24.6	NA	3,600	3,477
LONE STAR GAS CO.	31,970	28,453	45.0	28.0	52.0%	2,389	2,407
OKLAHOMA NATURAL GAS CO.	589,269	585,230	63.6	31.0	86.0%	3,375	3,445
TEXAS							
ARKANSAS LOUISIANA GAS CO.	42,219	36,942	42.6	25.6	60.0%	2,432	2,269
CITY PUBLIC SERVICE	263,507	229,251	30.8	25.1	63.2%	1,796	1,606
ENTEX, INC.	859,967	849,273	36.0	40.0	68.9%	1,739	1,847
LONE STAR GAS CO.	1,100,481	979,428	45.0	28.0	52.0%	2,389	2,407
SOUTHERN UNION GAS CO.	373,771	373,771	29.0	34.0	98.0%	2,100	2,350
MOUNTAIN							
ARIZONA							
CITIZENS UTILITIES CO.	5,840	5,217	39.6	32.3	90.0%	2,229	2,721
SOUTHWEST GAS CORP.	478,277	404,381	27.4	19.5	46.4%	1,085	1,217
COLORADO							
CITY OF COLORADO SPRINGS	104,720	104,720	62.7	31.3	81.0%	6,218	6,363
K N ENERGY, INC.	5,241	5,136	74.0	26.0	NA	6,050	6,292
PEOPLES NATURAL GAS (UTILICORP)	22,541	21,414	NA	NA	NA	NA	NA
PUBLIC SERVICE OF COLORADO	745,930	745,930	73.9	27.2	94.1%	5,945	6,014
IDAHO							
INTERMOUNTAIN GAS CO.	99,210	99,210	60.2	18.2	36.2%	6,498	6,189
WASHINGTON WATER POWER	18,160	16,200	83.6	NA	28.2%	6,844	6,895
MONTANA							
GREAT FALLS GAS CO.	20,208	20,208	76.7	34.1	97.0%	7,938	7,650
MONTANA POWER CO.	96,353	NA	118.0	27.0	25.0%	8,510	8,394
MONTANA-DAKOTA UTILITIES CO.	54,252	52,028	74.2	31.7	95.5%	7,423	7,212
NEVADA							
SOUTHWEST GAS CORP.	188,642	156,332	45.7	24.4	50.7%	3,001	3,138
WESTPAC UTILITIES	73,741	67,700	60.0	28.0	63.0%	NA	6,000
NEW MEXICO							
GAS COMPANY OF NEW MEXICO	306,604	306,604	NA	NA	NA	3,895	4,200
UTAH							
MOUNTAIN FUEL SUPPLY CO.	437,665	437,665	78.1	37.2	89.0%	5,797	5,882
WYOMING							
K N ENERGY, INC.	8,991	8,811	72.0	25.0	NA	6,920	7,065
MONTANA-DAKOTA UTILITIES CO.	10,580	9,363	77.3	36.5	91.0%	7,859	7,841
MOUNTAIN FUEL SUPPLY CO.	16,990	16,990	86.8	31.2	72.0%	8,504	8,352
WYOMING GAS CO.	5,123	5,123	107.0	25.6	NA	8,252	7,963
PACIFIC							
CALIFORNIA							
CITY OF LONG BEACH	146,096	146,096	79.0	39.0	59.0%	912	1,150
PACIFIC GAS AND ELECTRIC	3,176,258	3,112,693	42.0	22.0	78.0%	2,861	2,877
SAN DIEGO GAS & ELECTRIC	634,086	634,086	19.0	21.0	70.0%	1,068	1,068
SOUTHERN CALIFORNIA GAS CO.	4,295,838	4,214,243	34.7	32.1	88.9%	1,434	1,504
SOUTHWEST GAS CORP.	74,686	72,236	42.5	17.5	90.0%	3,417	3,563
HAWAII							
GASCO	31,200	NA	NA	20.0	NA	87	87
OREGON							
NORTHWEST NATURAL GAS CO.	269,770	246,944	53.7	24.1	30.0%	4,328	4,394
WASHINGTON							
NORTHWEST NATURAL GAS CO.	7,627	6,859	49.5	24.1	7.0%	4,328	4,394
WASHINGTON NATURAL GAS CO.	307,917	303,081	73.1	23.1	25.0%	4,636	4,912
WASHINGTON WATER POWER	58,997	57,200	96.4	NA	37.7%	6,844	6,895

APPENDIX 2 -- COMPETITIVE FUEL PRICES

DIVISION / STATE / COMPANY	PRINCIPAL CITY SERVED	AS OF DECEMBER 31, 1989 NATURAL GAS	FUEL OIL	ELECTRIC	PROPANE	GAS HTG. BILL	COMPETITIVE FUEL
NEW ENGLAND							
CONNECTICUT							
CONNECTICUT NATURAL GAS	HARTFORD	$6.20	$6.33	$23.74	$9.10	NA	OIL
SOUTHERN CONNECTICUT GAS CO.	BRIDGEPORT	$8.30	$4.76	$30.77	NA	$704.67	OIL
YANKEE GAS SERVICES CO.	WATERBURY	$8.22	$9.46	$23.45	$16.38	$744.73	OIL
MAINE							
NORTHERN UTILITIES	PORTLAND	$6.80	$9.15	$17.58	$10.37	$605.20	OIL
MASSACHUSETTS							
BAY STATE GAS COMPANY	BROCKTON	$6.51	$9.57	$20.52	$10.37	$579.39	OIL
BERKSHIRE GAS COMPANY	PITTSFIELD	$7.05	$5.74	$27.26	$9.83	$846.24	OIL
BOSTON GAS CO.	BOSTON	$7.19	$10.09	$22.49	$14.19	$762.14	OIL
COLONIAL GAS CO. - CAPE COD	CAPE COD	$7.51	$8.02	$33.12	$14.74	$638.35	OIL
COLONIAL GAS CO. - LOWELL	LOWELL	$7.92	$6.81	$24.91	$13.65	$744.43	OIL
COMMONWEALTH GAS CO.	WORCESTER	$7.31	$6.41	$21.98	$11.56	$877.20	OIL
ESSEX COUNTY GAS CO.	HAVERHILL	$7.45	$5.91	$21.98	NA	$625.55	OIL
FALL RIVER GAS CO.	FALL RIVER	$5.29	$9.95	$23.45	$16.38	$529.00	OIL
NEW HAMPSHIRE							
NORTHERN UTILITIES	PORTSMOUTH	$6.70	$9.57	$17.58	$10.37	$596.30	OIL
RHODE ISLAND							
PROVIDENCE GAS CO.	PROVIDENCE	$6.37	$10.09	$23.18	$8.50	$580.85	OIL
VERMONT							
VERMONT GAS SYSTEMS	BURLINGTON	$5.59	$6.01	$23.15	$12.77	$559.00	OIL
NEW ENGLAND DIVISION		$7.11	$8.21	$23.48	$12.20	$690.70	
MIDDLE ATLANTIC							
NEW JERSEY							
ELIZABETHTOWN GAS CO.	ELIZABETH	$7.18	$6.16	$26.95	$10.28	$653.74	OIL
NEW JERSEY NATURAL GAS COMPANY	ASHBURY PARK	$6.88	$4.27	$28.20	$7.63	$657.99	OIL
PUBLIC SERVICE ELECTRIC & GAS	NEWARK	$5.54	$6.95	$23.22	$20.09	$548.36	OIL
SOUTH JERSEY GAS CO.	ATLANTIC CITY	$6.10	$7.01	$26.99	NA	$461.77	OIL
NEW YORK							
BROOKLYN UNION GAS CO.	NEW YORK CITY	$7.24	$9.49	$22.86	NA	$702.28	OIL
CENTRAL HUDSON GAS & ELECTRIC	POUGHKEEPSIE	$6.64	$5.68	$28.08	NA	$405.04	OIL
COLUMBIA GAS OF NEW YORK	BINGHAMTON	$4.09	$6.01	$28.43	$11.46	$427.83	OIL
CONSOLIDATED EDISON CO.	NEW YORK CITY	$8.15	$9.69	$35.17	NA	$1,018.75	OIL
LONG ISLAND LIGHTING CO.	LONG ISLAND	$6.41	$6.90	$37.98	NA	$1,000.61	OIL
NATIONAL FUEL GAS DIST.	NEW YORK	$5.84	$6.01	$29.82	$10.15	$781.83	OIL
NIAGARA MOHAWK POWER CO.	SYRACUSE	$6.00	$6.75	$25.18	$12.00	$588.00	OIL
ORANGE & ROCKLAND UTILITIES	CLARKSTOWN	$5.99	$4.34	$31.85	$4.85	$664.45	OIL
ROCHESTER GAS & ELECTRIC	ROCHESTER	$5.75	$4.34	$22.51	$12.55	$551.43	ELECTRICITY
ST. LAWRENCE GAS CO.	MASSENA	$4.39	$5.48	$11.14	NA	$614.60	OIL
PENNSYLVANIA							
COLUMBIA GAS OF PA	PITTSBURGH	$4.79	NA	$33.97	NA	$497.58	ELECTRICITY
EQUITABLE RESOURCES	PITTSBURGH	$6.67	$6.01	$32.24	$8.41	$667.00	ELECTRICITY
NATIONAL FUEL GAS DIST.	ERIE	$5.06	$6.13	$26.38	$10.15	$693.88	OIL
NORTH PENN GAS CO.	RURAL	$4.90	$5.78	$20.22	$10.15	$441.00	OIL
PENNSYLVANIA GAS & WATER	SCRANTON	$5.19	$8.02	$24.33	$12.55	$808.08	ELECTRICITY
PEOPLES NATURAL GAS CO.	PITTSBURGH	$6.03	$5.38	$17.38	$9.83	$434.16	ELECTRICITY
PHILADELPHIA ELECTRIC CO.	UPPER DARBY	$6.84	$7.68	$19.28	$15.07	$615.15	ELECTRICITY
PHILADELPHIA GAS WORKS	PHILADELPHIA	$6.96	$8.35	$42.23	$10.92	$870.00	ELECTRICITY
PIKE COUNTY LIGHT & POWER	MILFORD	$4.45	$4.34	$24.80	$4.85	$423.05	OIL
UGI CORPORATION	READING	$5.42	$6.85	$24.03	$11.57	$440.10	OIL
MIDDLE ATLANTIC DIVISION		$6.15	$6.62	$27.62	$12.57	$652.26	
EAST NORTH CENTRAL							
ILLINOIS							
ILLINOIS POWER CO.	DECATUR	$5.53	$3.67	$17.29	$5.35	$426.92	ELECTRICITY
IOWA-ILLINOIS GAS & ELECTRIC	ROCK ISLAND	$4.05	$5.34	$18.78	$11.03	$340.60	PROPANE
NORTH SHORE GAS CO.	WAUKEGAN	$4.65	$5.74	$13.79	NA	$651.28	ELECTRICITY
NORTHERN ILLINOIS GAS CO.	ROCKFORD	$3.55	$5.97	$13.69	$6.43	$447.30	ELECTRICITY
PEOPLES GAS LIGHT & COKE	CHICAGO	$5.04	$5.83	$13.79	NA	$746.36	ELECTRICITY
UNITED CITIES GAS CO.	VIRDEN	$5.25	$4.01	$17.58	$9.83	NA	OIL
INDIANA							
CITIZENS GAS & COKE UTILITY	INDIANAPOLIS	$4.30	$5.68	$10.26	$6.44	$391.30	ELECTRICITY
KOKOMO GAS & FUEL CO.	KOKOMO	$6.20	$6.01	$15.39	$13.10	$602.77	ELECTRICITY
LAWRENCEBURG GAS CO.	LAWRENCEBURG	$5.63	$6.08	$13.48	$11.24	$563.00	ELECTRICITY
NORTHERN INDIANA PUBLIC SERV.	FORT WAYNE	$5.68	$5.81	$29.92	$9.61	NA	NA

APPENDIX 2 -- COMPETITIVE FUEL PRICES

DIVISION / STATE / COMPANY	PRINCIPAL CITY SERVED	AS OF DECEMBER 31, 1989 NATURAL GAS	FUEL OIL	ELECTRIC	PROPANE	GAS HTG. BILL	COMPETITIVE FUEL
OHIO VALLEY GAS CORP.	PORTLAND	$4.03	$5.68	$17.58	$8.52	$423.15	ELECTRICITY
MICHIGAN							
BATTLE CREEK GAS COMPANY	BATTLE CREEK	$5.03	$6.35	$18.17	$9.28	$694.14	ELECTRICITY
CONSUMERS POWER CO.	FLINT	$4.51	$7.21	$18.17	$12.99	$386.86	PROPANE
MICHIGAN CONSOLIDATED GAS	DETROIT	$5.21	$6.95	$29.31	$11.68	$573 10	OIL
MICHIGAN GAS CO.	HOLLAND	$4.82	$6.37	$18.53	$10.98	$607.69	OIL
MICHIGAN GAS UTILITIES CO.	MONROE	$3.49	$8.02	$30.07	$13.86	$338.53	ELECTRICITY
WISCONSIN PUBLIC SERVICE	MENOMINEE	$4.82	$7.23	$17.29	$13.82	$419.60	PROPANE
OHIO							
CINCINNATI GAS & ELECTRIC	CINCINNATI	$4.58	$6.08	$13.19	$11.24	$458.00	ELECTRICITY
COLUMBIA GAS OF OHIO	COLUMBUS	$4.68	NA	$21.40	NA	$473.64	ELECTRICITY
DAYTON POWER & LIGHT	DAYTON	$4.98	$5.62	$18.17	$11.39	$438.47	OIL
EAST OHIO GAS CO.	CLEVELAND	$6.71	$5.48	$30.77	$9.28	$704.21	ELECTRICITY
OHIO GAS CO.	BRYAN	$5.56	$5.85	$23.45	$12.06	$472.60	ELECTRICITY
WEST OHIO GAS CO.	LIMA	$5.19	$5.95	$19.05	$13.15	$497.39	ELECTRICITY
WISCONSIN							
MADISON GAS & ELECTRIC	MADISON	$5.63	$7.55	$19.90	$14.30	$481.93	OIL
WISCONSIN FUEL & LIGHT CO.	WAUSAU	$5.09	$7.21	$17.32	$12.55	$501.83	OIL
WISCONSIN GAS CO.	MILWAUKEE	$5.93	$6.34	$18.55	$11.03	$563.54	OIL
WISCONSIN NATURAL GAS CO.	RACINE	$5.70	$7.28	$18.05	$12.55	$596.22	OIL
WISCONSIN PUBLIC SERVICE	GREEN BAY	$5.05	$7.23	$17.29	$13.62	$438.92	PROPANE
WISCONSIN SOUTHERN GAS CO.	LAKE GENEVA	$5.51	$6.08	$19.81	$8.45	$494.16	ELECTRICITY
EAST NORTH CENTRAL DIVISION		$5.01	$6.13	$20.22	$9.90	$488.40	
WEST NORTH CENTRAL							
IOWA							
CEDAR FALLS UTILITIES	CEDAR FALLS	$4.89	$4.81	$14.95	$5.90	$571.15	PROPANE
IOWA PUBLIC SERVICE CO.	DES MOINES	$4.69	$6.15	$13.86	$11.23	$527.77	ELECTRICITY
IOWA-ILLINOIS GAS & ELECTRIC	DAVENPORT	$4.27	$5.34	$18.45	$11.03	$338.61	PROPANE
PEOPLES NATURAL GAS (UTILICORP)	DUBUQUE	$4.00	NA	NA	NA	NA	NA
UNITED CITIES GAS CO.	KEOKUK	$7.58	$3.34	$20.52	$6.55	NA	ELECTRICITY
KANSAS							
ARKANSAS LOUISIANA GAS CO.	WICHITA	$5.54	NA	$27.96	$11.35	$292.51	ELECTRICITY
K N ENERGY, INC.	COLBY	$3.83	NA	NA	NA	$290.78	ELECTRICITY
MIDWEST ENERGY, INC.	HAYS	$3.93	NA	$19.34	$5.79	$367.62	ELECTRICITY
PEOPLES NATURAL GAS (UTILICORP)	DODGE CITY	$3.28	NA	NA	NA	NA	NA
MINNESOTA							
CITY OF DULUTH	DULUTH	$4.50	$5.68	$15.39	$9.28	$630.00	OIL
IOWA PUBLIC SERVICE CO.	COON RAPIDS	$6.18	$6.15	$16.65	$11.30	$697.54	ELECTRICITY
MINNEGASCO, INC.	MINNEAPOLIS	$4.63	$7.68	$18.17	$12.55	$601.90	ELECTRICITY
NORTHERN STATES POWER CO.	ST PAUL	$5.06	$6.28	$17.41	$6.99	$572.09	OIL
PEOPLES NATURAL GAS (UTILICORP)	ROCHESTER	$3.72	NA	NA	NA	NA	NA
MISSOURI							
ASSOCIATED NATURAL GAS CO.	SIKESTON	$4.67	NA	$32.05	$5.13	$298.88	ELECTRICITY
CITY OF SPRINGFIELD	SPRINGFIELD	$4.20	$6.47	$13.59	$8.72	$318.82	ELECTRICITY
LACLEDE GAS CO.	ST. LOUIS	$4.34	$8.08	$13.96	$13.97	$313.35	ELECTRICITY
ST. JOSEPH LIGHT & POWER CO.	MARYVILLE	$3.49	$5.86	$8.79	$5.74	NA	ELECTRICITY
UNITED CITIES GAS CO.	HANNIBAL	$5.56	$3.34	$14.65	$6.55	NA	ELECTRICITY
NEBRASKA							
HASTINGS UTILITIES	HASTINGS	$4.57	NA	$18.46	NA	$473.03	NA
IOWA PUBLIC SERVICE CO.	SOUTH SIOUX CIT	$5.75	$6.15	$14.86	$11.18	$459.20	ELECTRICITY
K N ENERGY, INC.	SCOTTSBLUFF	$4.59	NA	NA	NA	$348.92	ELECTRICITY
METROPOLITAN UTILITIES DIST.	OMAHA	$4.22	$6.15	$14.07	$5.35	$337.20	ELECTRICITY
MINNEGASCO, INC.	LINCOLN	$5.06	$6.68	$12.90	$10.92	$333.96	ELECTRICITY
NORTHWESTERN PUBLIC SERVICE	GRAND ISLAND	$3.95	$2.74	$8.50	$3.82	$308.10	ALL
NORTH DAKOTA							
MONTANA-DAKOTA UTILITIES CO.	BISMARK	$4.31	$4.94	$19.84	$7.64	$367.90	ELECTRICITY
NORTHERN STATES POWER CO.	FARGO	$4.65	$6.28	$16.12	$6.99	$482.37	OIL
SOUTH DAKOTA							
IOWA PUBLIC SERVICE CO.	YANKTON	$6.00	$6.15	$15.50	$11.18	$677.82	ELECTRICITY
MINNEGASCO, INC.	SIOUX FALLS	$5.32	$8.02	$18.17	$12.01	$430.92	ELECTRICITY
MONTANA-DAKOTA UTILITIES CO.	RAPID CITY	$4.77	$4.80	$16.68	$8.50	$292.40	ELECTRICITY
NORTHWESTERN PUBLIC SERVICE	ABERDEEN	$4.68	$2.67	$8.50	$3.2[illegible]	$411.58	ALL
WEST NORTH CENTRAL DIVISION		$4.45	$5.54	$19.34	$9.14	$395.15	

APPENDIX 2 -- COMPETITIVE FUEL PRICES

DIVISION / STATE / COMPANY	PRINCIPAL CITY SERVED	AS OF DECEMBER 31, 1989 NATURAL GAS	FUEL OIL	ELECTRIC	PROPANE	GAS HTG. BILL	COMPETITIVE FUEL
SOUTH ATLANTIC							
DELAWARE							
CHESAPEAKE UTILITIES CORP.	DOVER	$5.86	$9.01	$18.46	$11.24	$580.14	ELECTRICITY
DELMARVA POWER & LIGHT CO.	WILMINGTON	$6.45	$8.28	$15.04	$14.96	$710.57	PROPANE
DISTRICT OF COLUMBIA							
WASHINGTON GAS LIGHT CO.	WASHINGTON	$7.22	$7.21	$15.80	$14.13	$620.92	ELECTRICITY
FLORIDA							
PEOPLES GAS SYSTEM, INC.	MIAMI	$5.04	$5.95	$20.40	$10.81	$136.14	ELECTRICITY
GEORGIA							
ATLANTA GAS LIGHT COMPANY	ATLANTA	$6.35	$6.35	$20.52	$9.83	$309.88	ELECTRICITY
UNITED CITIES GAS CO.	COLUMBUS	$5.34	$3.34	$20.52	$10.59	NA	ELECTRICITY
MARYLAND							
BALTIMORE GAS & ELECTRIC	BALTIMORE	$5.59	$6.52	$22.51	$21.83	$469.17	ELECTRICITY
COLUMBIA GAS OF MD	CUMBERLAND	$4.94	NA	$15.74	NA	$456.52	ELECTRICITY
WASHINGTON GAS LIGHT CO.	HYATTSVILLE	$5.84	$7.21	$15.53	$14.13	$483.50	ELECTRICITY
NORTH CAROLINA							
CITY OF WILSON	WILSON	$5.84	$6.35	$21.53	$10.81	$386.81	OIL
NORTH CAROLINA NATURAL GAS	FAYETTVILLE	$5.00	$5.01	$22.57	$8.84	$309.72	ELECTRICITY
PIEDMONT NATURAL GAS CO.	CHARLOTTE	$4.90	$5.81	$18.06	$9.17	$380.06	ELECTRICITY
PUBLIC SERVICE OF NC	RALEIGH	$5.35	$5.88	$21.98	$9.71	$441.38	ELECTRICITY
SOUTH CAROLINA							
PEOPLES NATURAL GAS CO. OF S.C.	FLORENCE	$8.68	$6.01	$23.45	$11.03	NA	ELECTRICITY
PIEDMONT NATURAL GAS CO.	GREENVILLE	$5.14	$5.81	$19.38	$9.17	$369.22	ELECTRICITY
SOUTH CAROLINA ELECTRIC & GAS	COLUMBIA	$6.53	$6.25	$20.47	$9.28	NA	ELECTRICITY
UNITED CITIES GAS CO.	GAFFNEY	$5.34	$3.34	$20.52	$10.59	NA	ELECTRICITY
VIRGINIA							
COMMONWEALTH GAS SERVICES	PORTSMOUTH	$5.57	$5.67	$12.75	$10.37	$431.65	ELECTRICITY
ROANOKE GAS CO.	ROANOKE	NA	$7.01	$17.29	$9.93	NA	ELECTRICITY
UNITED CITIES GAS CO.	BRISOL	$6.10	$5.68	$16.12	$10.37	NA	ELECTRICITY
VIRGINIA NATURAL GAS	NORFOLK	$7.26	$5.88	$17.00	$10.37	$341.24	ELECTRICITY
WASHINGTON GAS LIGHT CO.	ALEXANDRIA	$7.11	$7.21	$16.71	$14.13	$533.53	ELECTRICITY
WEST VIRGINIA							
HOPE GAS CO.	PARKERSBURG	$5.77	$4.01	$17.00	$6.99	$438.44	ELECTRICITY
SOUTH ATLANTIC DIVISION		$6.06	$6.50	$19.26	$11.78	$382.83	
EAST SOUTH CENTRAL							
ALABAMA							
ALABAMA GAS CORP.	BIRMINGHAM	$6.26	NA	$20.19	$8.73	$311.75	ELECTRICITY
CITY OF FLORENCE	FLORENCE	$5.66	$5.14	$16.91	$8.30	NA	ELECTRICITY
DECATUR UTILITIES	DECATUR	$3.72	NA	$16.36	$10.26	$182.42	ELECTRICITY
HUNTSVILLE UTILITIES GAS DEPT.	HUNTSVILLE	$4.51	$5.75	$15.06	$9.72	$451.40	NA
KENTUCKY							
COLUMBIA GAS OF KY	LEXINGTON	$4.67	NA	$14.92	NA	$410.04	ELECTRICITY
DELTA NATURAL GAS CO.	WINCHESTER	$5.41	$5.34	$17.58	$9.28	$351.65	ELECTRICITY
LOUISVILLE GAS & ELECTRIC	LOUISVILLE	$3.87	$7.20	$12.95	$12.55	$275.05	ELECTRICITY
UNION LIGHT, HEAT & POWER	COVINGTON	$4.51	$6.08	$12.63	$11.24	$451.00	ELECTRICITY
MISSISSIPPI							
ENTEX, INC.	GULFPORT	$4.69	$3.81	$17.35	$10.81	$192.29	ELECTRICITY
MISSISSIPPI VALLEY GAS CO.	JACKSON	$5.37	NA	$22.57	$8.73	$241.11	ELECTRICITY
TENNESSEE							
KNOXVILLE UTILITIES BOARD	KNOXVILLE	$5.59	NA	$16.71	$9.01	NA	ELECTRICITY
MEMPHIS LIGHT, GAS & WATER	MEMPHIS	$4.50	$6.01	$16.12	$9.28	$373.50	PROPANE
MIDDLE TENNESSEE NATURAL GAS	SMITHVILLE	$5.10	$6.81	$15.59	$12.99	$285.60	ELECTRICITY
NASHVILLE GAS CO.	NASHVILLE	$5.42	$5.34	$17.00	$9.61	$460.61	ELECTRICITY
UNITED CITIES GAS CO.	BRISTOL	$6.24	$5.68	$16.12	$10.37	NA	ELECTRICITY
EAST SOUTH CENTRAL DIVISION		$5.00	$7.33	$16.75	$11.46	$314.31	
WEST SOUTH CENTRAL							
ARKANSAS							
ARKANSAS LOUISIANA GAS CO.	LITTLE ROCK	$5.22	NA	$27.80	$14.19	$272.48	ELECTRICITY
ARKANSAS OKLAHOMA GAS CORP.	FORT SMITH	$3.43	NA	$17.58	$7.91	$222.63	ELECTRICITY
ARKANSAS WESTERN GAS CO.	FAYETTEVILLE	$4.23	$4.88	$18.49	$7.86	$287.64	ELECTRICITY
ASSOCIATED NATURAL GAS CO.	BLYTHEVILLE	$4.34	NA	$32.56	$5.13	$273.61	ELECTRICITY
LOUISIANA							
ARKANSAS LOUISIANA GAS CO.	SHREVEPORT	$6.42	NA	$17.73	$10.37	$295.96	ELECTRICITY
ENTEX, INC.	LAKE CHARLES	$7.06	$4.54	$20.52	$8.95	$247.11	ELECTRICITY
LOUISIANA GAS SERVICE CO.	HARVEY	$6.56	NA	$22.67	NA	$184.99	ELECTRICITY

APPENDIX 2 -- COMPETITIVE FUEL PRICES

DIVISION / STATE / COMPANY	PRINCIPAL CITY SERVED	AS OF DECEMBER 31, 1989 NATURAL GAS	FUEL OIL	ELECTRIC	PROPANE	GAS HTG. BILL	COMPETITIVE FUEL
NEW ORLEANS PUBLIC SERVICE	NEW ORLEANS	$6.14	$6.55	$19.66	$12.01	$165.78	ELECTRICITY
OKLAHOMA							
ARKANSAS LOUISIANA GAS CO.	LAWTON	$6.98	NA	$20.81	$4.91	$334.34	ELECTRICITY
ARKANSAS OKLAHOMA GAS CORP.	SALLISAW	$5.43	NA	$17.58	$7.91	$279.10	ELECTRICITY
LONE STAR GAS CO.	DURANT	$5.32	NA	$15.09	$7.42	$239.40	ELECTRICITY
OKLAHOMA NATURAL GAS CO.	OKLAHOMA CITY	$4.94	NA	$10.86	$6.55	$314.18	ELECTRICITY
TEXAS							
ARKANSAS LOUISIANA GAS CO.	TEXARKANA	$5.76	NA	$19.05	$8.08	$245.38	ELECTRICITY
CITY PUBLIC SERVICE	SAN ANTONIO	$4.69	NA	$17.97	$11.68	$144.45	ELECTRICITY
ENTEX, INC.	HOUSTON	$4.71	$4.68	$21.98	$9.28	$169.56	ELECTRICITY
LONE STAR GAS CO.	DALLAS	$5.65	NA	$11.14	$7.42	$254.25	ELECTRICITY
SOUTHHERN UNION GAS CO.	AUSTIN	$4.75	$6.01	$23.45	$13.65	$137.75	ELECTRICITY
WEST SOUTH CENTRAL DIVISION		$5.22	$5.13	$18.05	$8.01	$230.99	
MOUNTAIN							
ARIZONA							
CITIZENS UTILITIES CO.	NOGALES	$5.97	NA	$23.72	$17.47	$236.41	PROPANE
SOUTHWEST GAS CORP.	PHOENIX	$8.08	$3.74	$25.35	$10.92	$221.18	ELECTRICITY
COLORADO							
CITY OF COLORADO SPRINGS	COLORADO SPRIN	$4.38	NA	$16.74	NA	$274.63	ELECTRICITY
K N ENERGY, INC.	YUMA	$4.51	NA	NA	NA	$333.52	ELECTRICITY
PEOPLES NATURAL GAS (UTILICORP)	FOUNTAIN	$3.37	NA	NA	NA	NA	NA
PUBLIC SERVICE OF COLORADO	DENVER	$4.91	$5.04	$24.82	$6.11	$362.52	ELECTRICITY
IDAHO							
INTERMOUNTAIN GAS CO.	BOISE	$5.25	$6.41	$13.78	$13.20	$315.87	ELECTRICITY
WASHINGTON WATER POWER	LEWISTON	$4.21	$6.67	$15.44	$11.78	$351.66	ELECTRICITY
MONTANA							
GREAT FALLS GAS CO.	GREAT FALLS	$4.14	$4.68	$15.62	$9.28	$317.54	ELECTRICITY
MONTANA POWER CO.	MISSOULA	$3.55	$5.08	$14.36	$7.53	$418.90	WOOD
MONTANA-DAKOTA UTILITIES CO.	BILLINGS	$4.47	$5.34	$19.05	$8.72	$331.45	ELECTRICITY
NEVADA							
SOUTHWEST GAS CORP.	LAS VEGAS	$5.65	NA	$13.89	$14.19	$258.34	ELECTRICITY
WESTPAC UTILITIES	RENO	$5.40	$6.21	$22.83	$15.17	$324.00	OIL
NEW MEXICO							
GAS COMPANY OF NEW MEXICO	ALBUQUERQUE	NA	NA	$22.71	$7.48	NA	ELECTRICITY
UTAH							
MOUNTAIN FUEL SUPPLY CO.	SALT LAKE CITY	$4.69	$5.38	$22.27	$12.23	$366.24	ELECTRICITY
WYOMING							
K N ENERGY, INC.	DOUGLAS	$4.16	NA	NA	NA	$299.23	ELECTRICITY
MONTANA-DAKOTA UTILITIES CO.	SHERIDAN	$4.71	NA	$18.96	$8.72	$363.77	ELECTRICITY
MOUNTAIN FUEL SUPPLY CO.	GREEN RIVER	$4.52	$5.38	$22.27	$12.23	$392.52	ELECTRICITY
WYOMING GAS CO.	WORLAND	$5.13	NA	$23.97	NA	$549.12	ELECTRICITY
MOUNTAIN DIVISION		$5.47	$4.98	$22.33	$8.62	$317.21	
PACIFIC							
CALIFORNIA							
CITY OF LONG BEACH	LONG BEACH	$4.47	$4.55	$31.95	$4.58	$352.89	ELECTRICITY
PACIFIC GAS AND ELECTRIC	SAN FRANCISCO	$4.89	$6.13	$37.64	$11.14	$205.38	PROPANE
SAN DIEGO GAS & ELECTRIC	SAN DIEGO	$4.87	NA	$27.96	$14.74	$92.53	ELECTRICITY
SOUTHERN CALIFORNIA GAS CO.	LOS ANGELES	$6.03	$6.45	$27.26	$8.69	$209.24	ELECTRICITY
SOUTHWEST GAS CORP.	VICTORVILLE	$5.30	$5.81	$31.26	$12.01	$225.25	PROPANE
HAWAII							
GASCO	HONOLULU	$11.99	NA	$21.84	$17.07	NA	ELECTRICITY
OREGON							
NORTHWEST NATURAL GAS CO.	PORTLAND	$6.39	$6.37	$12.74	$15.93	$343.09	ELECTRICITY
WASHINGTON							
NORTHWEST NATURAL GAS	VANCOUVER	$5.90	$6.37	$10.84	$15.93	$292.10	ELECTRICITY
WASHINGTON NATURAL GAS CO.	SEATTLE	$5.49	$6.01	$15.86	NA	$401.32	ELECTRICITY
WASHINGTON WATER POWER	SPOKANE	$3.95	$6.67	$14.61	$11.78	$380.47	ELECTRICITY
PACIFIC DIVISION		$5.49	$6.26	$30.07	$10.25	$213.44	

APPENDIX 3 -- ADDITIONS FROM NEW CONSTRUCTION AND CONVERSIONS

DIVISION / STATE / COMPANY	ADDITIONS FROM NEW CONSTRUCTION		TOTAL CONVERSIONS TO GAS		LESS TOTAL LOSSES		NET ADDITIONS	
	1989	1990	1989	1990	1989	1990	1989	1990
NEW ENGLAND								
CONNECTICUT								
CONNECTICUT NATURAL GAS	1,716	1,800	837	950	120	120	2,673	2,870
SOUTHERN CONNECTICUT GAS CO.	1,272	NA	1,449	NA	NA	NA	2,721	NA
YANKEE GAS SERVICES CO.	2,800	1,900	2,138	NA	80	90	4,858	1,810
MAINE								
NORTHERN UTILITIES	100	100	300	300	100	100	300	300
MASSACHUSETTS								
BAY STATE GAS COMPANY	1,700	2,000	5,400	4,800	100	100	7,000	6,700
BERKSHIRE GAS COMPANY	250	150	NA	NA	22	22	228	128
BOSTON GAS CO.	2,001	1,850	6,082	5,800	NA	NA	8,083	7,650
COLONIAL GAS CO. - CAPE COD	NA	NA	1,550	NA	NA	NA	1,550	NA
COLONIAL GAS CO. - LOWELL	920	660	652	1,700	5	5	1,567	2,355
COMMONWEALTH GAS CO.	1,729	1,700	1,396	1,535	NA	NA	3,125	3,235
ESSEX COUNTY GAS CO.	500	200	210	310	26	26	684	484
FALL RIVER GAS CO.	NA	NA	560	560	10	10	550	550
NEW HAMPSHIRE								
NORTHERN UTILITIES	200	200	300	300	100	100	400	400
RHODE ISLAND								
PROVIDENCE GAS CO.	2,596	2,000	669	616	NA	NA	3,265	2,616
VERMONT								
VERMONT GAS SYSTEMS	617	500	580	940	NA	NA	1,197	1,440
MIDDLE ATLANTIC								
NEW JERSEY								
ELIZABETHTOWN GAS CO.	2,304	2,550	2,135	2,142	NA	NA	4,439	4,692
NEW JERSEY NATURAL GAS COMPANY	7,954	NA	488	441	NA	NA	8,442	441
PUBLIC SERVICE ELECTRIC & GAS	12,341	16,000	12,287	12,500	NA	NA	24,628	28,500
SOUTH JERSEY GAS CO.	8,691	9,100	1,695	1,775	12	12	10,374	10,863
NEW YORK								
BROOKLYN UNION GAS CO.	5,200	5,000	13,000	10,000	400	500	17,800	14,500
CENTRAL HUDSON GAS & ELECTRIC	348	500	363	500	NA	NA	711	1,000
COLUMBIA GAS OF NEW YORK	468	410	339	380	232	171	575	619
CONSOLIDATED EDISON CO.	1,410	1,500	2,632	2,800	200	200	3,842	4,100
LONG ISLAND LIGHTING CO.	2,826	2,600	3,851	4,000	NA	NA	6,677	6,600
NIAGARA MOHAWK POWER CO.	5,200	5,000	NA	NA	NA	NA	5,200	5,000
ORANGE & ROCKLAND UTILITIES	1,598	1,940	NA	NA	NA	NA	1,598	1,940
ROCHESTER GAS & ELECTRIC	2,828	2,627	1,582	1,767	NA	NA	4,410	4,394
ST. LAWRENCE GAS CO.	41	35	171	205	11	9	201	231
PENNSYLVANIA								
COLUMBIA GAS OF PA	3,540	3,434	647	907	833	1,219	3,354	3,122
EQUITABLE RESOURCES	1,500	2,500	58	102	1,538	1,530	20	1,072
NATIONAL FUEL GAS DIST.	758	NA	NA	NA	NA	NA	758	NA
NORTH PENN GAS CO.	325	335	245	270	NA	NA	570	605
PENNSYLVANIA GAS & WATER	823	1,000	2,648	2,840	NA	NA	3,471	3,840
PEOPLES NATURAL GAS CO.	2,197	2,093	524	417	461	450	2,260	2,060
PHILADELPHIA ELECTRIC CO.	4,944	3,842	2,407	2,275	100	200	7,251	5,917
PHILADELPHIA GAS WORKS	1,770	2,000	1,724	1,800	NA	NA	3,494	3,800
PIKE COUNTY LIGHT & POWER	8	NA	NA	NA	NA	NA	8	NA
UGI CORPORATION	2,896	2,900	2,683	2,780	753	425	4,826	5,255
EAST NORTH CENTRAL								
ILLINOIS								
ILLINOIS POWER CO.	1,691	NA	199	NA	670	NA	1,220	NA
IOWA-ILLINOIS GAS & ELECTRIC	146	150	4	NA	147	100	3	50
NORTH SHORE GAS CO.	3,750	3,490	379	380	80	84	4,049	3,786
NORTHERN ILLINOIS GAS CO.	45,533	41,000	1,400	1,300	6,000	6,000	40,933	36,300

APPENDIX 3 — ADDITIONS FROM NEW CONSTRUCTION AND CONVERSIONS

DIVISION / STATE / COMPANY	ADDITIONS FROM NEW CONSTRUCTION		TOTAL CONVERSIONS TO GAS		LESS TOTAL LOSSES		NET ADDITIONS	
	1989	1990	1989	1990	1989	1990	1989	1990
PEOPLES GAS LIGHT & COKE	2,400	2,600	597	606	1,871	1,200	1,126	2,006
UNITED CITIES GAS CO.	149	150	51	50	NA	NA	200	200
INDIANA								
KOKOMO GAS & FUEL CO.	236	225	219	220	15	10	440	435
LAWRENCEBURG GAS CO.	55	45	54	44	NA	NA	109	89
OHIO VALLEY GAS CORP.	60	70	348	360	13	8	395	422
MICHIGAN								
BATTLE CREEK GAS COMPANY	134	180	129	77	33	NA	230	257
CONSUMERS POWER CO.	17,607	17,211	2,700	2,700	NA	NA	20,307	19,911
MICHIGAN CONSOLIDATED GAS	12,530	12,000	NA	NA	6,230	6,000	6,300	6,000
MICHIGAN GAS CO.	1,439	1,500	1,414	850	497	300	2,356	2,050
MICHIGAN GAS UTILITIES CO.	2,900	3,000	800	900	1,400	1,000	2,300	2,900
WISCONSIN PUBLIC SERVICE	28	25	18	15	5	5	41	35
OHIO								
CINCINNATI GAS & ELECTRIC	2,616	1,411	2,616	1,411	NA	NA	5,232	2,822
COLUMBIA GAS OF OHIO	15,900	15,463	4,161	4,124	3,101	1,188	16,960	18,399
DAYTON POWER & LIGHT	1,716	NA	NA	NA	NA	NA	1,716	NA
EAST OHIO GAS CO.	8,170	7,400	2,855	2,550	2,590	NA	8,435	9,950
OHIO GAS CO.	400	400	237	220	70	70	567	550
WEST OHIO GAS CO.	420	150	370	140	16	90	774	200
WISCONSIN								
MADISON GAS & ELECTRIC	1,425	1,723	768	927	NA	NA	2,193	2,650
WISCONSIN FUEL & LIGHT CO.	438	434	382	389	NA	NA	820	823
WISCONSIN GAS CO.	2,359	3,044	3,605	2,940	838	NA	5,126	5,984
WISCONSIN NATURAL GAS CO.	4,571	5,200	2,171	2,000	NA	NA	6,742	7,200
WISCONSIN PUBLIC SERVICE	1,617	1,600	1,304	1,200	25	25	2,896	2,775
WISCONSIN SOUTHERN GAS CO.	462	600	758	750	35	35	1,185	1,315
WEST NORTH CENTRAL								
IOWA								
CEDAR FALLS UTILITIES	89	50	15	58	9	18	95	90
IOWA-ILLINOIS GAS & ELECTRIC	1,491	1,400	199	91	81	50	1,609	1,441
PEOPLES NATURAL GAS (UTILICORP)	687	600	454	500	NA	NA	1,141	1,100
UNITED CITIES GAS CO.	5	5	10	10	10	NA	5	15
KANSAS								
ARKANSAS LOUISIANA GAS CO.	1	NA	NA	NA	22	NA	(21)	NA
MIDWEST ENERGY, INC.	90	20	3	NA	4	NA	89	20
PEOPLES NATURAL GAS (UTILICORP)	121	100	65	80	NA	NA	186	180
MINNESOTA								
CITY OF DULUTH	100	100	80	NA	71	NA	109	100
MINNEGASCO, INC.	12,011	11,500	2,282	1,525	100	100	14,193	12,925
NORTHERN STATES POWER CO.	4,734	4,000	3,198	2,600	NA	NA	7,932	6,600
PEOPLES NATURAL GAS (UTILICORP)	2,264	2,000	602	650	NA	NA	2,866	2,650
MISSOURI								
ASSOCIATED NATURAL GAS CO.	619	NA	NA	NA	4	NA	615	NA
CITY OF SPRINGFIELD	1,355	NA	NA	NA	NA	NA	1,355	NA
LACLEDE GAS CO.	5,815	NA	622	NA	1,537	NA	4,900	NA
ST. JOSEPH LIGHT & POWER CO.	27	NA	17	NA	2	NA	42	NA
UNITED CITIES GAS CO.	50	50	NA	30	10	10	40	70
NEBRASKA								
HASTINGS UTILITIES	32	NA	NA	NA	10	NA	22	NA
METROPOLITAN UTILITIES DIST.	1,778	2,300	351	530	272	252	1,857	2,578
MINNEGASCO, INC.	1,129	NA	77	80	50	50	1,156	30
NORTHWESTERN PUBLIC SERVICE	30	30	NA	NA	NA	NA	30	30
PEOPLES NATURAL GAS (UTILICORP)	365	300	194	200	NA	NA	559	500

APPENDIX 3 — ADDITIONS FROM NEW CONSTRUCTION AND CONVERSIONS

DIVISION / STATE / COMPANY	ADDITIONS FROM NEW CONSTRUCTION		TOTAL CONVERSIONS TO GAS		LESS TOTAL LOSSES		NET ADDITIONS	
	1989	1990	1989	1990	1989	1990	1989	1990
NORTH DAKOTA								
MONTANA-DAKOTA UTILITIES CO.	577	NA	577	NA	NA	NA	1,154	NA
NORTHERN STATES POWER CO.	427	400	397	600	NA	NA	824	1,000
SOUTH DAKOTA								
MINNEGASCO, INC.	669	700	113	100	20	20	762	780
MONTANA-DAKOTA UTILITIES CO.	774	NA	773	NA	NA	NA	1,547	NA
NORTHWESTERN PUBLIC SERVICE	30	30	NA	NA	3	NA	27	30
SOUTH ATLANTIC								
DELAWARE								
CHESAPEAKE UTILITIES CORP.	448	NA	53	NA	2	NA	499	NA
DISTRICT OF COLUMBIA								
WASHINGTON GAS LIGHT CO.	300	400	1,000	1,050	1,720	1,600	(420)	(150)
FLORIDA								
PEOPLES GAS SYSTEM, INC.	652	520	867	950	279	310	1,240	1,160
GEORGIA								
ATLANTA GAS LIGHT COMPANY	32,158	33,000	4,480	5,000	NA	NA	36,638	38,000
UNITED CITIES GAS CO.	748	750	96	95	55	55	789	790
MARYLAND								
BALTIMORE GAS & ELECTRIC	1,330	3,064	800	800	300	300	1,830	3,564
COLUMBIA GAS OF MD	462	530	120	120	148	208	434	442
WASHINGTON GAS LIGHT CO.	4,260	5,200	1,100	1,300	1,000	1,000	4,360	5,500
NORTH CAROLINA								
CITY OF WILSON	200	205	273	267	NA	NA	473	472
NORTH CAROLINA NATURAL GAS	630	600	1,395	1,450	100	100	1,925	1,950
PIEDMONT NATURAL GAS CO.	3,956	5,300	NA	NA	NA	NA	3,956	5,300
PUBLIC SERVICE OF NC	5,980	6,000	5,660	6,045	1,040	635	10,600	11,410
SOUTH CAROLINA								
PIEDMONT NATURAL GAS CO.	648	1,100	NA	NA	NA	NA	648	1,100
UNITED CITIES GAS CO.	63	65	54	55	10	10	107	110
VIRGINIA								
COMMONWEALTH GAS SERVICES	5,204	4,255	1,317	1,329	NA	NA	6,521	5,584
UNITED CITIES GAS CO.	625	625	236	250	25	25	836	850
VIRGINIA NATURAL GAS	6,851	5,600	883	1,000	80	100	7,654	6,500
WASHINGTON GAS LIGHT CO.	7,800	10,000	1,600	1,600	800	800	8,600	10,800
WEST VIRGINIA								
HOPE GAS CO.	790	800	49	50	66	66	773	784
EAST SOUTH CENTRAL								
ALABAMA								
ALABAMA GAS CORP.	3,137	2,800	1,493	1,750	2,255	2,300	2,375	2,250
CITY OF FLORENCE	97	100	267	280	37	40	327	340
DECATUR UTILITIES	391	325	47	66	9	12	429	379
HUNTSVILLE UTILITIES GAS DEPT.	250	NA	367	NA	203	NA	414	NA
KENTUCKY								
COLUMBIA GAS OF KY	2,000	1,641	292	607	706	386	1,586	1,862
UNION LIGHT, HEAT & POWER	502	508	501	507	NA	NA	1,003	1,015
MISSISSIPPI								
ENTEX, INC.	900	780	475	300	1,731	1,500	(356)	(420)
TENNESSEE								
MIDDLE TENNESSEE NATURAL GAS	850	800	988	890	50	40	1,788	1,650
NASHVILLE GAS CO.	1,850	2,250	2,600	NA	NA	NA	4,450	2,250
UNITED CITIES GAS CO.	4,265	4,300	1,679	1,680	45	45	5,899	5,935
WEST SOUTH CENTRAL								
ARIZONA								
CITIZENS UTILITIES CO.	89	80	NA	NA	NA	NA	89	80
SOUTHWEST GAS CORP.	6,375	7,500	1,538	6,800	3,350	3,250	4,563	11,050

APPENDIX 3 -- ADDITIONS FROM NEW CONSTRUCTION AND CONVERSIONS

DIVISION / STATE / COMPANY	ADDITIONS FROM NEW CONSTRUCTION		TOTAL CONVERSIONS TO GAS		LESS TOTAL LOSSES		NET ADDITIONS	
	1989	1990	1989	1990	1989	1990	1989	1990
ARKANSAS								
ARKANSAS LOUISIANA GAS CO.	1,109	NA	NA	NA	1,122	NA	(13)	NA
ARKANSAS WESTERN GAS CO.	1,667	NA	NA	NA	NA	NA	1,667	NA
ASSOCIATED NATURAL GAS CO.	401	NA	NA	NA	1	NA	400	NA
COLORADO								
CITY OF COLORADO SPRINGS	807	856	NA	NA	NA	NA	807	856
PEOPLES NATURAL GAS (UTILICORP)	729	600	389	550	NA	NA	1,118	1,150
PUBLIC SERVICE OF COLORADO	10,693	9,378	NA	NA	NA	NA	10,693	9,378
IDAHO								
INTERMOUNTAIN GAS CO.	1,846	2,163	1,567	1,612	NA	NA	3,413	3,775
WASHINGTON WATER POWER	1,031	800	245	360	NA	NA	1,276	1,160
LOUISIANA								
ARKANSAS LOUISIANA GAS CO.	173	NA	NA	NA	383	NA	(210)	NA
ENTEX, INC.	306	400	224	235	645	495	(115)	140
NEW ORLEANS PUBLIC SERVICE	30	15	NA	NA	205	205	(175)	(190)
MONTANA								
GREAT FALLS GAS CO.	158	200	65	65	40	40	183	225
MONTANA POWER CO.	1,378	1,128	1,812	2,433	NA	NA	3,190	3,561
MONTANA-DAKOTA UTILITIES CO.	1,287	NA	NA	1,287	NA	NA	1,287	1,287
MOUNTAIN								
NEVADA								
SOUTHWEST GAS CORP.	10,370	11,214	1,669	1,240	87	85	11,952	12,369
WESTPAC UTILITIES	2,500	2,600	200	1,000	NA	NA	2,700	3,600
NEW MEXICO								
GAS COMPANY OF NEW MEXICO	NA	NA	512	1,500	NA	NA	512	1,500
OKLAHOMA								
ARKANSAS LOUISIANA GAS CO.	112	NA	NA	NA	115	NA	(3)	NA
LONE STAR GAS CO.	NA	NA	5	5	NA	NA	5	5
OKLAHOMA NATURAL GAS CO.	5,604	6,700	780	1,600	1,500	1,500	4,884	6,800
TEXAS								
ARKANSAS LOUISIANA GAS CO.	172	NA	NA	NA	135	NA	37	NA
CITY PUBLIC SERVICE	NA	NA	NA	NA	10,546	2,252	(10,546)	(2,252)
ENTEX, INC.	11,105	10,250	962	865	2,715	3,700	9,352	7,415
LONE STAR GAS CO.	5,691	6,000	84	85	NA	NA	5,775	6,085
SOUTHERN UNION GAS CO.	7,000	10,000	NA	NA	NA	NA	7,000	10,000
UTAH								
MOUNTAIN FUEL SUPPLY CO.	7,400	7,626	NA	NA	NA	NA	7,400	7,626
WYOMING								
MONTANA-DAKOTA UTILITIES CO.	1	NA	NA	NA	NA	NA	1	NA
MOUNTAIN FUEL SUPPLY CO.	175	180	NA	NA	NA	NA	175	180
PACIFIC								
CALIFORNIA								
CITY OF LONG BEACH	1,176	1,100	NA	NA	456	500	720	600
PACIFIC GAS AND ELECTRIC	60,000	NA	NA	NA	10,000	NA	50,000	NA
SAN DIEGO GAS & ELECTRIC	17,400	14,300	NA	NA	NA	NA	17,400	14,300
SOUTHERN CALIFORNIA GAS CO.	85,624	NA	1,000	1,000	9,333	9,098	77,291	(8,098)
SOUTHWEST GAS CORP.	5,330	5,000	234	310	4	6	5,560	5,304
OREGON								
NORTHWEST NATURAL GAS CO.	4,101	5,629	4,638	6,586	1,438	1,637	7,301	10,578
WASHINGTON								
NORTHWEST NATURAL GAS CO.	255	156	289	183	89	46	455	293
WASHINGTON NATURAL GAS CO.	12,280	17,000	13,760	17,000	615	615	25,425	33,385
WASHINGTON WATER POWER	1,100	1,500	526	750	NA	NA	1,626	2,250

A1775-4-U

RESIDENTIAL GAS

MARKET SURVEY

1·9·9·0

Residential Gas Market

Survey: 1990

43rd Annual Survey
Gas Utility Industry
United States

Published by:

American Gas Association
1515 Wilson Boulevard
Arlington, Virginia 22209

Prepared by:

Michael I. German
Senior Vice President
Planning and Analysis Group

Richard L. Itteilag
Director
Gas Demand Analysis Division

James Pavle
Manager
Gas Demand Analysis Division

Toufic K. Roufca
Research Assistant
Gas Demand Analysis Division

COPYRIGHT, August 1991
Reproduction in whole or part prohibited
without permission of copyright owners.
A.G.A. Catalog No. F00091

Contents

		Page
Introduction		1
I.	Executive Summary	3
II.	United States Housing Market in 1990	5
	New Housing Completions	5
III.	Residential Gas Customers in 1990	7
	Total Residential Customers	7
	Househeating Customers	7
	Gas Househeating Unit Additions	7
	Househeating Conversions	9
IV.	Residential Gas Consumption	11
	Gas Consumption per Unit	11
	Conservation	13
	Heating Bills	14
Appendix 1 -	1990 Househeating Customer and Consumption Data By Company	15
Appendix 2 -	Competitive Fuel Prices	21
Appendix 3 -	1990 Househeating Unit Additions	27

List of Tables

		Page
1.	1990 Private Housing Completions by Heating Fuel	6
2.	Customers and Unit Additions (as of December 31, 1990)	8
3.	Househeating Conversions to Gas by Fuel	9
4.	1990 Average Gas Consumption/Unit by Region	12
5.	1990 Average Conservation by Region	13
6.	1989 and 1990 Gas Househeating Bills by Division	14

List of Figures

1.	Gas vs. Electric Single Family Home Completions 1981-1990	3
2.	Housing Completions by Region - 1990	5
3.	Gas Furnace vs. Electric Heat Pump New Single-Family Housing Completions 1981-1990	6
4.	Househeating Additions by Region - 1990	7
5.	Househeating Conversions to Gas by Fuel	10

INTRODUCTION

This year's report is the 43rd annual gas "househeating" survey conducted by the American Gas Association. The title of the report has been changed to reflect the fact that more than just residential heating customer data are included. It is envisioned that in future years The Residential Gas Market Survey will also incorporate data on other aspects of the residential market, such as utility marketing activities and data on non-heating equipment.

The data collected for 1990, provide a unique and comprehensive portrait of the residential gas market. Detailed information is presented by state and region, including customers, fuel prices, inventory additions from new homes, and conversions from alternative fuels. **Company-specific data reported in this publication are unavailable in any other format.**

A total of 144 gas utility companies responded to this year's survey. The response rate is at the same level as the prior year. The respondent companies represented the vast majority of the nation's residential gas customers, i.e., some 92 percent in 1990. The information provided by these utilities was expanded to obtain the state and national customer totals shown in Table 2. Individual company data are listed by region and state in Appendices 1, 2 and 3. Please note that some tabular data may not add to totals due to rounding.

The American Gas Association wishes to thank those companies who participated in the survey for making this publication possible.

I. Executive Summary

■The total number of residential gas customers reached 50 million in 1990, up 2.4 percent over 1989. There was customer growth in all nine census divisions.

■Total conversions of existing units from alternative fuels to gas househeating were nearly 219,000 in 1990, up 21 percent from last year's level. Based on A.G.A. survey data, 118,000 or 54 percent of all heating conversions, were from fuel oil to gas, 57,000 (26%) were from electricity, 25,000 (12%) from LPG, and 19,000 (9%) from "other fuels" (coal, wood, and non-classified).

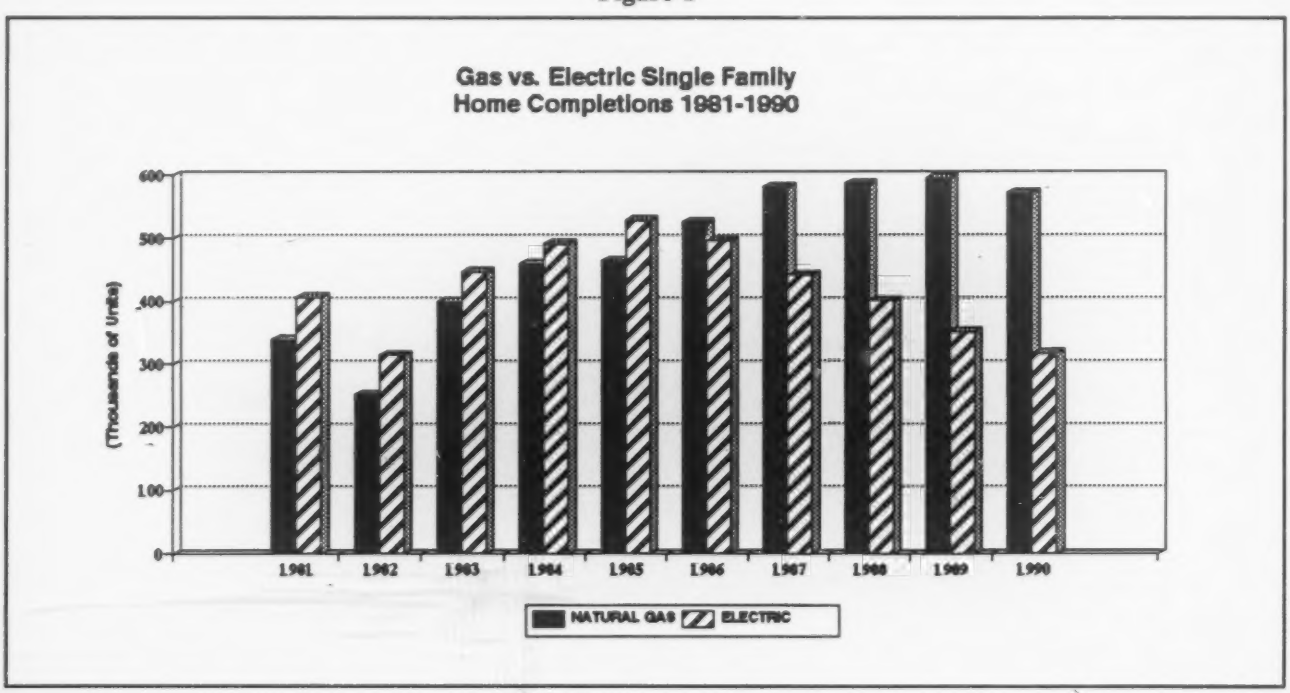
■Compared with last year, conversions were up for all fuels and in all regions of the country except for the Pacific, which was down slightly. The largest gain was in conversions from electric heating, which increased by 56 percent over last year to the highest level on record.

■Natural gas again improved its market share in new housing, while the U.S. housing construction market slowed down. For the fifth year in a row gas heated single-family home completions showed a greater market share than electricity. According to U.S. Census data the ratio was extended to 59 percent for gas compared to 33 percent for electricity. Total new housing completions declined by 7 percent to 1.31 million in 1990. Gas' overall market share of new housing completions increased to 55 percent in 1990 from 53 percent in 1989. The overall electric share again dropped, to 38 percent from 40 percent.

■Gas househeating unit additions from new construction numbered 693,000, a 6 percent increase from 1989. The addition of new gas househeating units from conversions of existing units and new housing combined brought the total to 911,849 in 1990, up 9 percent from last year.

■The annual gas househeating bill for a single-family home declined in 1990 by 4.6 percent from $394 to $376. This is due to a combination of relatively flat gas prices and, more significantly, the relatively warm weather in both the first quarter and fourth quarters. Changes ranged from a 21.1 percent decline in the Pacific division (where heating loads are comparatively small) to a 5.2% percent increase in the West North Central.

Figure 1



II. United States Housing Market In 1990

New Housing - Completions

New gas single-family completions decreased slightly to 572,000 according to U.S. Census Bureau data (See Table 1). This 4 percent decline was less than the 7 percent rate of decline in total new single-family completions. Thus, the gas share increased to 59 percent of single-family home completions, while the electric share dropped to 33 percent. Gas completions have exceeded electric completions in the single-family market for the fifth consecutive year.

Natural gas showed a small decline in the multi-family completions market. New gas multi-family completions increased market share in 1990, however, to 44%. Electric multi-family completions' market share decreased slightly to 53 percent. Both fuels showed an absolute decline in 1990 multi-family completions. Electricity declined by 33,000 units, while gas declined by 17,000 units.

Overall, natural gas again improved its share of combined single- and multi-family completions in 1989 to 53 percent, up from 51 percent in 1988 and 48 percent in 1987. Combined single- and multi-family electric completions declined to 40 percent from 42 percent in 1988 and 45 percent in 1987. Figure 2 shows the regional differences in the proportion of gas and electric single- and multi-family completions.

Only in the South did new electric-heated completions among single-family homes outnumber gas-heated completions. However, as has been the trend, the difference was smaller in 1990, 59,000, compared with a difference of 94,000 in 1989 and 118,000 in 1988. In the multi-family sector, gas completions also narrowed the margin, to 32,000 units overall relative to electricity. Again, the South showed a declining margin (80,000) in electric-heated completions compared to gas. There was a notable decline in electric multi-family completions in the South and West regions, which largely accounted for the improved gas share in the multi-family market this year.

Underlying this trend in declining electric share is the steady drop in electric heat pump shipments. New single-family completions with electric heat pumps fell from a peak of 324,000 units in 1985 to 221,000 units in 1990 (see Figure 3).

Figure 2

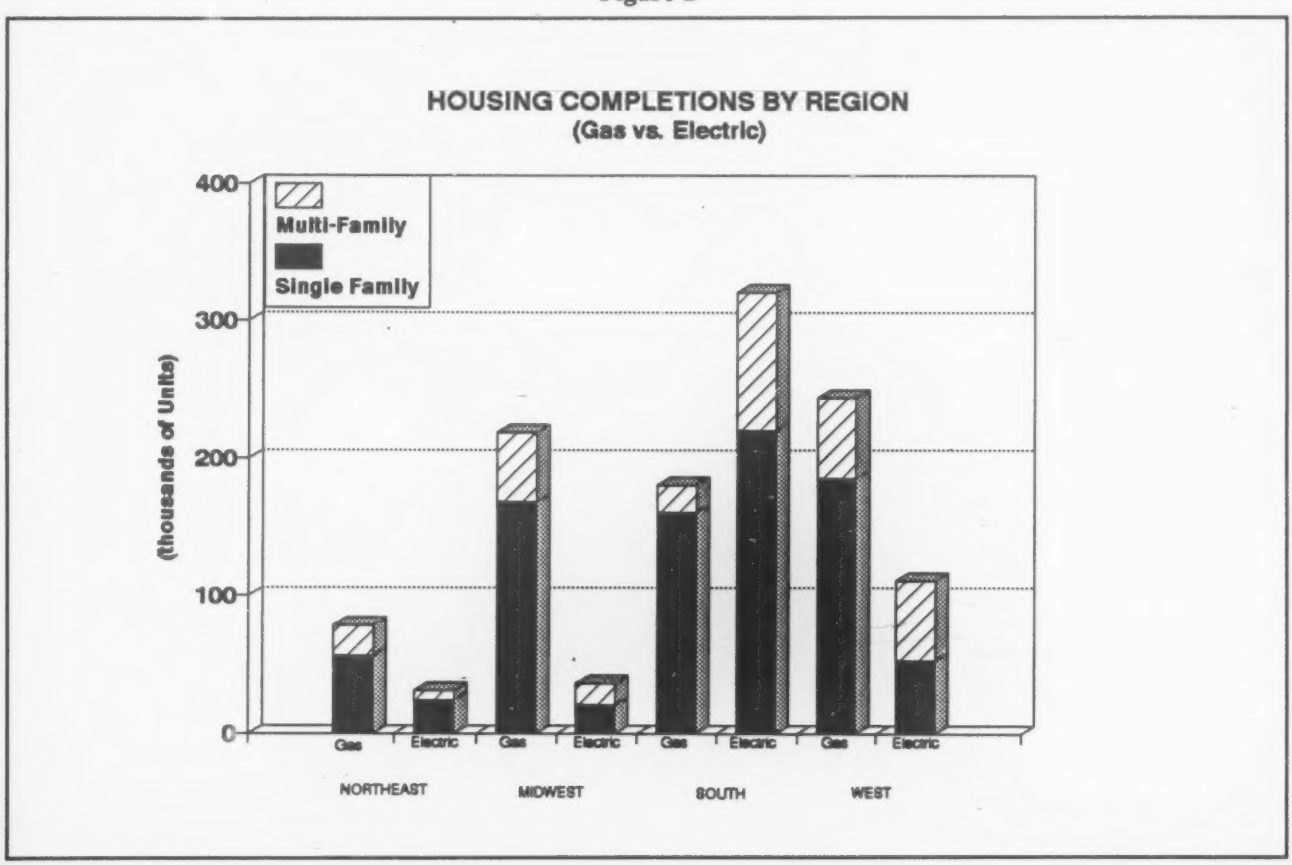


Figure 3

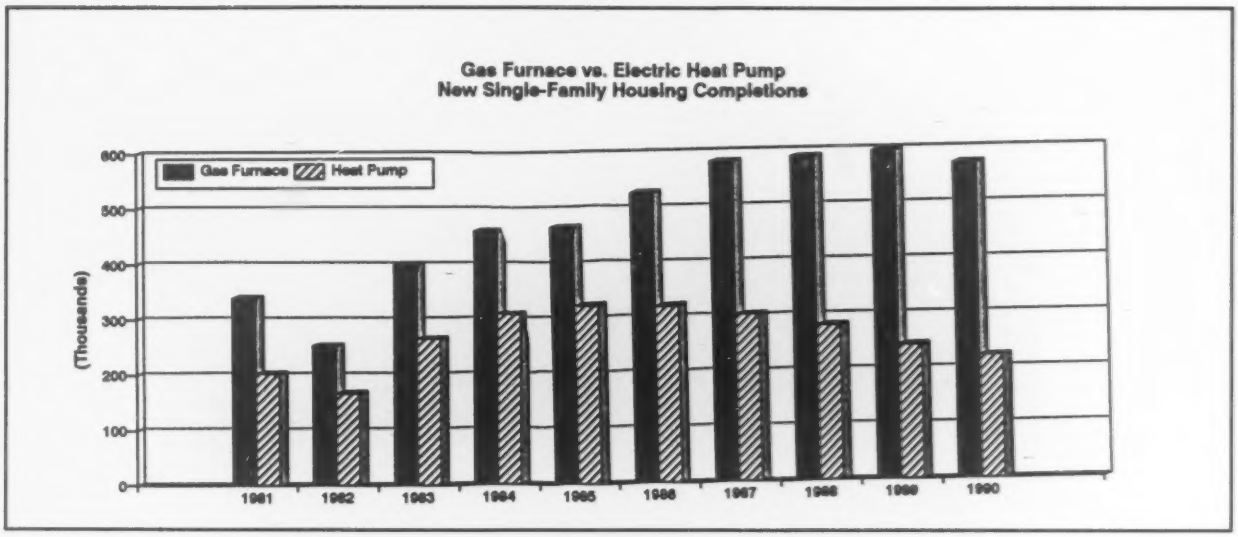


Table 1

1990 PRIVATE HOUSING COMPLETIONS - BY HEATING FUEL

(Thousands of Units)

Single-Family	Share	Units	Northeast	Midwest	South	West
Gas[a]	59%	572	56	169	161	186
Electricity	33%	318	24	21	220	53
Oil	5%	47	42	B	3	B
Other	3%	27	3	4	5	15
Subtotal	100%	965	125	194	389	254
Multi-Family						
Gas[a]	44%	150	22	50	20	59
Electricity	53%	182	7	16	100	59
Oil	1%	2	2	Z	1	Z
Other	2%	7	Z	S	1	4
Subtotal	100%	341	31	66	122	122
Combined						
Gas[a]	55%	723	78	219	181	245
Electricity	38%	500	31	37	320	112
Oil	4%	49	44	B,Z	4	B,Z
Other	3%	34	4	4,S	6	19
Total		1,306	157	261	511	376

[a]Includes liquefied petroleum gas. B = Insufficient sample size

Z = less than 500 units. S = did not meet publication standards

Source: U.S. Bureau of the Census, Characteristics of New Housing: 1990, July 1991.

III. Residential Gas Customers in 1990

Total Residential Customers

The total number of residential gas customers reached 50 million in 1990, a 2.4 percent increase over 1989 (see Table 2). Most utilities define a customer as a single meter. The number is expanded based on the sample of companies responding to the survey to reflect the universe of customers. Unlike last year, when the South accounted for over half of the customer growth, all nine census divisions showed growth this year.

Househeating Customers

About 44.1 million customers, 88.0 percent of all 1990 residential gas customers, were househeating customers. The expanded number of net new househeating customers totaled 982,292, which is generally consistent with the new housing unit data.

Gas Househeating Unit Additions

The gas industry added 911,849 househeating units in 1990, a 9 percent increase over 1989. Of total additions, 692,898 were from new housing, an increase in new units of 6 percent over 1989. New units were also added from conversions of existing households to gas heat.

Figure 4 shows the relative proportion of new househeating unit additions for each of the nine census divisions in 1990. The unit additions are actual totals, not expanded to reflect the entire potential market. The figure shows how conversions play a larger relative role in New England and the Middle Atlantic. New additions play a relatively larger role in the Pacific region, reflecting population growth and in the heavily saturated East North Central region.

Figure 4

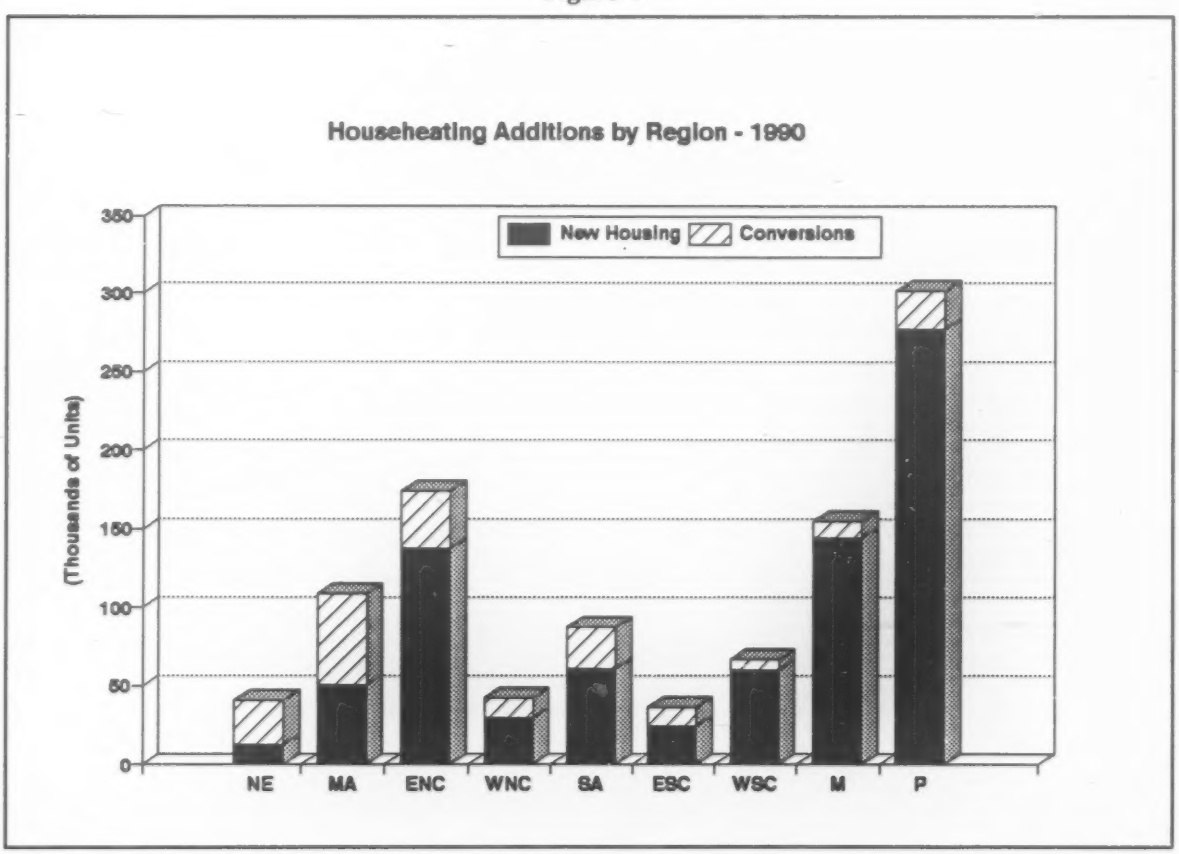


TABLE 2
CUSTOMERS AND UNIT ADDITIONS
(as of December 31, 1990)

Region, Division and State	CUSTOMERS TOTAL	CUSTOMERS HOUSE HEATING	CUSTOMERS PERCENT HEATING	UNIT ADDITIONS TOTAL (100%)	UNIT ADDITIONS NEW HOUSING NUMBER	UNIT ADDITIONS NEW HOUSING (%)	UNIT ADDITIONS CONVERSIONS NUMBER	UNIT ADDITIONS CONVERSIONS (%)
UNITED STATES	50,144,332	44,113,304	88.0%	911,849	692,898	76.0%	218,951	24.0%
NORTHEAST	10,185,960	6,852,365	67.3%	138,553	50,688	36.6%	87,865	63.4%
New England	1,913,357	1,364,327	71.3%	40,596	12,035	29.6%	28,561	70.4%
Connecticut	422,762	288,866	68.3%	5,060	1,726	34.1%	3,334	65.9%
Maine	11,744	5,270	44.9%	900	100	11.1%	800	88.9%
Massachusetts	1,197,849	848,712	70.9%	28,076	7,539	26.9%	20,537	73.1%
New Hampshire	66,405	56,275	84.7%	1,786	549	30.7%	1,237	69.3%
Rhode Island	191,685	144,584	75.4%	3,332	1,788	53.7%	1,544	46.3%
Vermont	22,912	20,619	90.0%	1,442	333	23.1%	1,109	76.9%
Middle Atlantic	8,272,603	5,488,039	66.3%	109,992	50,688	46.1%	59,304	53.9%
New Jersey	1,986,372	1,396,441	70.3%	36,028	13,599	37.7%	22,429	62.3%
New York	3,986,804	2,069,106	51.9%	44,304	21,623	48.8%	22,681	51.2%
Pennsylvania	2,299,427	2,022,491	88.0%	29,660	15,466	52.1%	14,194	47.9%
MIDWEST	15,236,310	14,580,720	95.7%	216,990	167,695	77.3%	49,295	22.7%
East North Central	11,003,289	10,453,411	95.0%	174,483	137,973	79.1%	36,510	20.9%
Illinois	3,290,091	2,941,262	89.4%	44,131	41,674	94.4%	2,457	5.6%
Indiana	1,300,452	1,257,273	96.7%	20,239	16,937	83.7%	3,302	16.3%
Michigan	2,565,167	2,529,923	98.6%	44,758	35,441	79.2%	9,317	20.8%
Ohio	2,747,460	2,702,369	98.4%	39,948	29,572	74.0%	10,376	26.0%
Wisconsin	1,100,119	1,022,584	93.0%	25,407	14,349	56.5%	11,058	43.5%
West North Central	4,233,022	4,127,309	97.5%	42,507	29,722	69.9%	12,785	30.1%
Iowa	702,341	673,641	95.9%	5,204	3,427	65.9%	1,777	34.1%
Kansas	745,971	740,498	99.3%	1,890	1,841	97.4%	49	2.6%
Minnesota	963,308	924,713	96.0%	20,518	12,891	62.8%	7,627	37.2%
Missouri	1,208,011	1,191,552	98.6%	7,041	6,126	87.0%	915	13.0%
Nebraska	422,541	413,756	97.9%	4,854	3,741	77.1%	1,113	22.9%
North Dakota	85,985	81,300	94.6%	1,446	836	57.8%	610	42.2%
South Dakota	104,864	101,848	97.1%	1,554	860	55.3%	694	44.7%
SOUTH	12,527,823	10,875,931	86.8%	190,433	144,661	76.0%	45,772	24.0%
South Atlantic	4,739,932	3,713,809	78.4%	87,555	61,005	69.7%	26,550	30.3%
Delaware	89,394	67,819	75.9%	1,661	1,579	95.1%	82	4.9%
District of Columbia	132,743	105,107	79.2%	2,322	1,817	78.3%	505	21.7%
Florida	458,834	381,138	83.1%	1,080	450	41.7%	630	58.3%
Georgia	1,346,011	1,319,488	98.0%	27,659	22,588	81.7%	5,071	18.3%
Maryland	773,452	634,999	82.1%	8,757	5,390	61.6%	3,367	38.4%
North Carolina	508,260	338,597	66.6%	15,367	6,115	39.8%	9,252	60.2%
South Carolina	325,695	54,409	16.7%	4,400	1,105	25.1%	3,295	74.9%
Virginia	753,485	686,351	91.1%	25,527	21,263	83.3%	4,264	16.7%
West Virginia	352,058	125,810	35.7%	782	698	89.3%	84	10.7%
East South Central	2,259,441	1,947,753	86.2%	36,539	24,201	66.2%	12,338	33.8%
Alabama	685,752	654,275	95.4%	7,975	4,893	61.4%	3,082	38.6%
Kentucky	619,553	599,345	96.7%	6,811	5,171	75.9%	1,640	24.1%
Mississippi	373,203	141,893	38.0%	5,271	3,385	64.2%	1,886	35.8%
Tennessee	580,933	552,239	95.1%	16,482	10,752	65.2%	5,730	34.8%
West South Central	5,528,450	5,214,369	94.3%	66,339	59,455	89.6%	6,884	10.4%
Arkansas	508,577	462,219	90.9%	3,216	3,216	100.0%	0	0.0%
Louisiana	939,090	898,102	95.6%	2,968	2,518	84.8%	450	15.2%
Oklahoma	804,878	783,420	97.3%	6,509	5,724	87.9%	785	12.1%
Texas	3,275,905	3,070,629	93.7%	53,646	47,997	89.5%	5,649	10.5%
WEST	12,194,238	11,804,288	96.8%	365,873	329,854	90.2%	36,019	9.8%
Mountain	3,029,578	2,795,269	92.3%	63,723	52,581	82.5%	11,142	17.5%
Arizona	587,007	496,650	84.6%	9,958	7,702	77.3%	2,256	22.7%
Colorado	980,205	978,831	99.9%	13,380	12,794	95.6%	586	4.4%
Idaho	117,740	115,774	98.3%	6,394	2,832	44.3%	3,562	55.7%
Montana	175,306	74,136	42.3%	713	173	24.3%	540	75.7%
Nevada	241,295	206,026	85.4%	18,082	16,427	90.8%	1,655	9.2%
New Mexico	361,704	361,704	100.0%	5,699	4,194	73.6%	1,505	26.4%
Utah	441,780	441,780	100.0%	9,247	8,251	89.2%	996	10.8%
Wyoming	124,541	120,368	96.6%	250	208	83.2%	42	16.8%
Pacific	9,164,660	9,009,019	98.3%	302,150	277,273	91.8%	24,877	8.2%
Alaska	a	a	a	a	a	a	a	a
California	8,417,548	8,314,553	98.8%	249,520	248,943	99.8%	577	0.2%
Hawaii	a	a	a	a	a	a	a	a
Oregon	305,457	279,611	91.5%	15,934	9,455	59.3%	6,479	40.7%
Washington	441,655	414,854	93.9%	36,696	18,875	51.4%	17,821	48.6%

a Insufficient data

Regional totals may not add due to rounding.

Househeating Conversions

In 1990, 218,951 housing units were converted from an alternative fuel to natural gas (see Table 3), an increase of 21 percent compared with last year's level of conversions. The respondents were asked to provide a breakdown of conversions by fuel type. Based on these data, 118,216 units, or 54 percent, were conversions from fuel oil to gas. The share of fuel oil conversions has dropped from 83 percent in 1983 as conversions from electricity have grown. Electricity conversions increased in 1990 to 56,973 units, which is a 56 percent increase relative to last year. The electric share of conversions rose to 26 percent. Propane conversions increased to 25,206. Consequently, fuel oil and propane accounted for a combined total of 66 percent of total conversions. Other (coal, wood, and non-classified) increased to 18,547.

Figure 5 shows the trend in conversions by fuel type since 1981. While oil conversions have resumed at least a steady growth, gas' improved competitiveness with other fuels is evident.

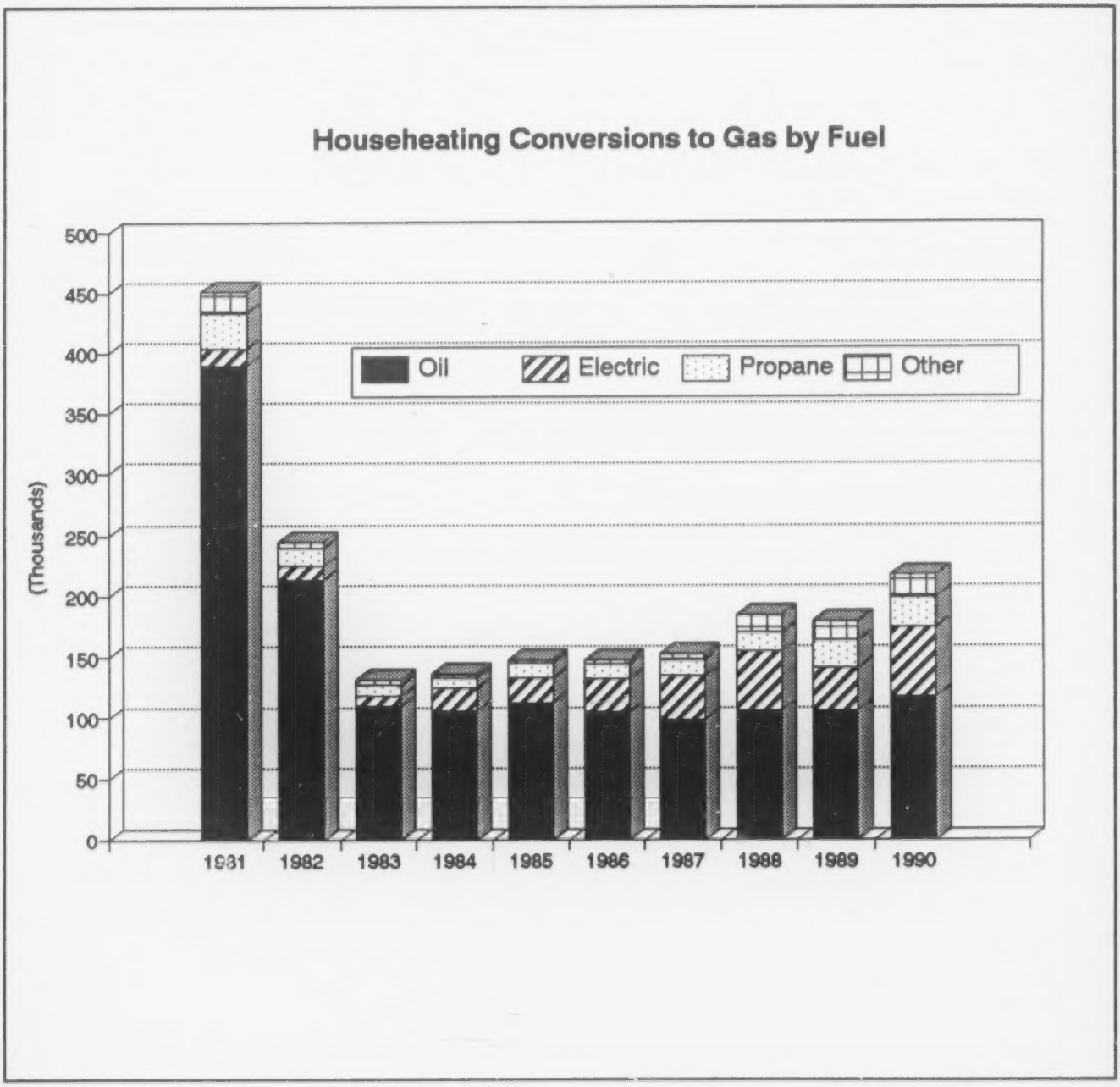
Table 3

Househeating Conversions to Natural Gas in 1990 by Fuel

	ELECTRICITY		OIL		PROPANE		OTHER		TOTAL	
REGION	UNITS	%	UNITS	%	UNITS	%	UNITS	%	UNITS	%
UNITED STATES	56,973	26.0%	118,216	54.0%	25,206	11.5%	18,547	8.5%	218,951	100.0%
New England	2,282	8.0%	24,055	84.2%	1,274	4.5%	949	3.3%	28,561	13.0%
Middle Atlantic	4,597	7.8%	50,753	85.6%	890	1.5%	3,063	5.2%	59,304	27.1%
East North Central	6,575	18.0%	16,182	44.3%	5,621	15.4%	8,131	22.3%	36,510	16.7%
West North Central	2,741	21.4%	4,464	34.9%	2,694	21.1%	2,885	22.6%	12,785	5.8%
South Atlantic	10,358	39.0%	10,750	40.5%	4,611	17.4%	830	3.1%	26,550	12.1%
East South Central	8,331	67.5%	711	5.8%	3,256	26.4%	39	0.3%	12,338	5.6%
West South Central	4,245	61.7%	0	0.0%	2,638	38.3%	0	0.0%	6,884	3.1%
Mountain	3,619	32.5%	1,406	12.6%	3,614	32.4%	2,502	22.5%	11,142	5.1%
Pacific	14,225	57.2%	9,895	39.8%	608	2.4%	148	0.6%	24,877	11.4%

Note: Other includes coal, wood and non-classified conversions

Figure 5


Househeating Conversions to Gas by Fuel
(Thousands)
500
450
400
350
300
250
200
150
100
50
0
Oil
Electric
Propane
Other
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990

IV. Residential Gas Consumption

Gas Consumption Per Unit

Respondents to the survey estimated the average annual gas consumption for both single-family and multi-family dwellings. Utilities representing 86 percent of all gas househeating customers responded to this portion in the survey. These responses were then used to develop the U.S. and regional average estimates on per unit gas use. Both categories were weighted by the number of residential gas customers for each responding utility in each state. In addition, the multi-family data represented a weighted average of dwellings with 2-4 units, and dwellings with 5 or more units (see Table 4).

Due to changes in the reporting methods of some utilities, particularly in the definition of base load and multi-family gas use and consumption per unit (as well as annual changes in heating degree day totals), consumption data from year to year are not always comparable. With this caveat in mind, a review of 1990 combined average consumption data (U.S. average weighted by customer and dwelling type) indicated that total per unit gas consumption was 86.4 Mcf for all units, while househeating was 57.1 Mcf and base load consumption was 29.3 Mcf. This represents a 3.1 percent decrease compared with last year for househeating, which is consistent with the fact that heating degree days were down nationally for 1990, by 11.5 percent as reported by survey respondents. In single-family dwellings, gas consumption for househeating was 74.6 Mcf, while base load consumption was 35.3 Mcf. By comparison the average multi-family dwelling unit in buildings with 2-4 units consumed 47.9 Mcf and 25.7 Mcf, respectively, for househeating and base load use. In dwellings with more than 5 units, gas consumption per unit for househeating was 39.6 Mcf and base load consumption per unit was 24.0 Mcf.

Table 4 includes weather data for each region in the form of annual heating degree days for calendar year 1990 and the 30-year normal heating degree days. The degree-day data are weighted by gas househeating customers based on the companies who responded.

Table 4

1990 AVERAGE ANNUAL GAS CONSUMPTION/UNIT[a] BY REGION (Mcf)

Region	Single Family	Multi-Family 2-4 Units	Multi-Family 5+ Units	Combined[b] Average	Heating Degree Days[c] 1989	30-Year
Northeast						
Heating	96.2	63.3	51.5	78.3	5,062	5,619
Baseload	48.9	27.3	24.9	38.2		
Total	145.1	90.6	76.4	116.5		
Midwest						
Heating	99.3	67.7	60.2	79.4	5,775	6,490
Baseload	34.2	26.8	23.8	29.2		
Total	133.5	94.5	84.0	108.6		
South						
Heating	53.8	38.0	33.6	43.1	2,536	2,997
Baseload	29.3	25.6	24.1	26.7		
Total	83.1	63.6	57.7	69.8		
West						
Heating	37.5	23.1	18.8	27.1	2,506	2,694
Baseload	28.8	23.5	23.8	25.6		
Total	66.3	46.6	42.6	52.7		
U.S. Average						
Heating	74.6	47.9	39.6	57.1	4,083	4,557
Baseload	35.3	25.7	24.0	29.3		
Total	109.9	73.6	63.6	86.4		

[a]Results for 1990 are based on responses from 172 different markets.

[b]Weighted by customer and dwelling type.

[c]Calendar year heating degree days as reported are then weighted by gas househeating customers (see Appendix 1 for detailed definitions). The 30-year normal are also weighted by gas househeating customers as opposed to total population.

Conservation

Conservation, measured as the total percentage decline in consumption per househeating customer not explained by the weather, has reduced consumption to an average of 28.5 percent below the pre-1973 level. This is a small increase over last year. Conservation percentages reported by each company were weighted by househeating customer data from each company to derive regional and national conservation estimates. The magnitude of conservation ranged from a high of 36.8 percent below the pre-1973 level of consumption in the Pacific division to a low of 18.8 percent in the East South Central division (see Table 5).

Table 5

1990 AVERAGE CONSERVATION BY REGION
(Percent Decline from 1973 Baseline)

Region	Conservation (%)[a]
NORTHEAST	24.1%
New England	21.6%
Middle Atlantic	24.7%
MIDWEST	28.6%
East North Central	27.4%
West North Central	27.6%
SOUTH	22.3%
South Atlantic	23.3%
East South Central	18.8%
West South Central	29.2%
WEST	35.5%
Mountain	27.9%
Pacific	36.8%
UNITED STATES	28.5%

[a] The total percent decline in consumption normalized for weather from the pre–embargo 1973 baseline. Results for 1990 are based on individual company responses fromm 115 different markets and are weighted by househeating customers.

Heating Bills

The annual gas househeating bill for a single-family home declined in 1990 as shown in Table 6. This is due to a combination of relatively flat gas prices and, more significantly, the relatively warm weather in both the first quarter and fourth quarters. In many instances where heating bills increased it was as a result of the impact on gas rates of higher state taxes. Changes ranged from a 21.1 percent decline in the Pacific division (where heating loads are comparatively small) to a 5.2% percent increase in the West North Central. Nationally, the average gas househeating bill decreased from $394 to $376 or about 4.6 percent.

Table 6

1989 AND 1990 GAS HOUSEHEATING BILLS BY DIVISION[a]

Division	1989 Gas Heating Bills	1990 Gas Heating Bills	% Change
United States	$393.59	$375.51	−4.6%
New England	$690.70	$710.95	2.9%
Middle Atlantic	$652.26	$596.83	−8.5%
East North Central	$488.40	$467.66	−4.2%
West North Central	$395.15	$415.65	5.2%
South Atlantic	$382.83	$380.51	−0.6%
East South Central	$314.31	$305.79	−2.7%
West South Central	$230.99	$213.30	−7.7%
Mountain	$317.21	$304.26	−4.1%
Pacific	$213.44	$168.31	−21.1%

[a] Weighted by househeating customers.

Appendix 1
Customers and Consumption

APPENDIX 1 -- CUSTOMERS AND CONSUMPTION

DIVISION / STATE	COMPANY	RESIDENTIAL CUSTOMERS YEAR-END 1990	HOUSEHEATING CUSTOMERS YEAR-END 1990	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) HEATING	BASELOAD	GAS-HTG MKT-SHARE (%)	HEATING DEGREE DAYS 1990	30 YEAR NORMAL
NEW ENGLAND								
CONNECTICUT								
	SOUTHERN CONNECTICUT GAS CO.	138,668	89,248	78.6	27.1	27.0	4,809	5,501
	YANKEE GAS SERVICES CO.	156,660	107,189	93.4	40.4	54.0	5,531	6,184
MAINE								
	NORTHERN UTILITIES	12,400	6,000	70.0	26.2	6.0	7,117	8,045
MASSACHUSETTS								
	BAY STATE GAS COMPANY	210,600	168,200	86.3	31.8	40.0	6,175	6,883
	BERKSHIRE GAS COMPANY	26,920	19,742	120.0	30.0	35.0	6,226	7,348
	BOSTON GAS CO.	462,521	263,878	106.0	36.0	39.0	4,959	5,634
	COLONIAL GAS CO. - CAPE COD	48,930	45,745	8.5	3.5	60.0	5,567	6,361
	COLONIAL GAS CO. - LOWELL	55,686	96,889	90.0	50.0	48.4	5,934	6,466
	COMMONWEALTH GAS CO.			120.0	30.0	N/A		
	ESSEX COUNTY GAS CO.	33,789	26,555	77.4	31.4	45	6,314	6,998
	FALL RIVER GAS CO.	45,792	40,360	105.0	27.0	N/A	5,178	6,056
	NEW HAMPSHIRE							
	ENERGYNORTH	54,382	48,000	103.7	26.7	26.0	6,618	7,524
	NORTHERN UTILITIES	12,200	10,600	69.6	23.9	14.0	6,450	7,217
RHODE ISLAND								
	PROVIDENCE GAS CO.	137,833	105,997	81.1	34.6	46.7	5,012	5,897
	VALLEY GAS CO.	48,881	37,620	75.0	20.0	47.0	5,119	6,465
VERMONT								
	VERMONT GAS SYSTEMS	19,320	17,527	100.0	30.0	N/A	6,732	7,876
MIDDLE ATLANTIC								
NEW JERSEY								
	ELIZABETHTOWN GAS CO.	209,500	141,609	91.0	43.0	60	4,836	4,977
	NEW JERSEY NATURAL GAS COMPANY	286,528	255,612	71.9	34.1	52.0	4,101	5,049
	PUBLIC SERVICE ELECTRIC & GAS	1,300,000	884,319	76.5	20.4	N/A	4,027	N/A
	SOUTH JERSEY GAS CO.	201,962	175,305	60.0	29.6	44.0	3,597	4,559
NEW YORK								
	BROOKLYN UNION GAS CO.	1,102,803	663,834	97.0	45.0	50.5	4,817	4,900
	CENTRAL HUDSON GAS & ELECTRIC	49,952	36,753	61.0	50.0	16.7	5,507	6,358
	COLUMBIA GAS OF NEW YORK	62,009	57,433	106.6	34.9	78.7	6,668	7,274
	CONSOLIDATED EDISON CO.	1,085,568	180,790	100.0	175.0	50.7	N/A	N/A
	LONG ISLAND LIGHTING CO.	386,810	204,982	141.0	19.6	24.0	4,139	5,023
	NATIONAL FUEL GAS DIST.	479,096	463,049	132.3	34.2	89.8	5,830	6,657
	NEW YORK STATE ELECTRIC & GAS	144,243	116,101	N/A	N/A	N/A	6,833	7,000
	NIAGARA MOHAWK POWER CO.	475,000	329,702	N/A	N/A	N/A	5,868	6,837
	ORANGE & ROCKLAND UTILITIES	95,165	90,256	88.0	49.0	56.0	4,918	5,947
	ROCHESTER GAS & ELECTRIC	241,652	219,242	87.0	34.0	N/A	6,246	6,731
	ST. LAWRENCE GAS CO.	10,999	10,148	134.0	24.0	78.0	7,411	8,274
PENNSYLVANIA								
	COLUMBIA GAS OF PA	318,419	304,890	102.1	33.7	88.5	5,076	5,705
	EQUITABLE RESOURCES	245,209	241,707	90.0	3.3	95.0	4,865	5,950
	NATIONAL FUEL GAS DIST.	190,619	188,806	141.8	32.8	82.0	5,286	6,519
	NORTH PENN GAS CO.	29,719	29,485	78.0	35.0	N/A	6,003	7,307
	PENNSYLVANIA GAS & WATER	118,907	101,161	124.9	21.4	42.0	5,339	6,330
	PEOPLES NATURAL GAS CO.	309,842	303,453	73.4	38.8	98.0	5,476	5,699
	PHILADELPHIA ELECTRIC CO.	317,831	254,564	90	30	N/A	6,058	6,630
	PHILADELPHIA GAS WORKS	504,200	411,000	125.0	43.0	60.0	4,430	4,600
	PIKE COUNTY LIGHT & POWER	940	883	73.0	48.0	30.0	4,918	5,947
	UGI CORPORATION	201,334	139,215	75.0	26.5	24.9	4,884	5,480
EAST NORTH CENTRAL								
ILLINOIS								
	ILLINOIS POWER CO.	353,049	344,838	77.2	27.6	77.6	4,626	5,473
	IOWA-ILLINOIS GAS & ELECTRIC	58,429	56,403	74.0	38.3	78.0	5,515	6,274
	NORTH SHORE GAS CO.	112,228	108,107	137.0	47.0	93.0	5,690	6,455
	NORTHERN ILLINOIS GAS CO.	1,552,724	1,496,556	110.0	30.0	88.0	5,201	6,177
	PEOPLES GAS LIGHT & COKE	802,885	587,752	142.0	41.0	93.0	5,690	6,455
	UNITED CITIES GAS CO.	19,403	18,433	N/A	N/A	79.0	3,856	4,729
	WISCONSIN POWER & LIGHT CO.	3,745	3,564	88.0	22.9	N/A	6,865	7,472
INDIANA								
	CITIZENS GAS & COKE UTILITY	218,532	211,722	91.0	35.0	75.0	4,687	5,577
	KOKOMO GAS & FUEL CO.	27,538	27,226	86.2	24.6	80.0	5,196	5,854
	LAWRENCEBURG GAS CO.	4,036	3,902	102.5	41.0	27.0	4,492	5,247

DIVISION / STATE	COMPANY	RESIDENTIAL CUSTOMERS YEAR-END 1990	HOUSEHEATING CUSTOMERS YEAR-END 1990	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) HEATING	BASELOAD	GAS-HTG MKT-SHARE (%)	HEATING DEGREE DAYS 1990	30 YEAR NORMAL
	NORTHERN INDIANA PUBLIC SERV.	546,504	529,330	112.0	27.8	82.0	5,499	6,371
	OHIO VALLEY GAS CORP.	23,303	22,984	106.0	26.0	70.0	4,765	5,801
MICHIGAN								
	BATTLE CREEK GAS COMPANY	30,972	29,953	120.0	38.0	N/A	5,474	6,378
	CONSUMERS POWER CO.	1,262,839	1,246,946	84.0	36.0	96.4	6,668	6,699
	MICHIGAN CONSOLIDATED GAS	1,027,503	998,426	110.0	45.0	85.0	5,967	6,817
	MICHIGAN GAS CO.	74,552	73,402	120.0	39.0	73.0	6,616	7,194
	MICHIGAN GAS UTILITIES CO.	110,500	109,200	85.0	30.0	24.0	5,996	6,573
	WISCONSIN PUBLIC SERVICE	8,559	6,679	103.0	24.0	65.0	9,142	9,830
OHIO								
	CINCINNATI GAS & ELECTRIC	292,710	271,303	102.5	41.0	52.0	4,492	5,247
	COLUMBIA GAS OF OHIO	1,086,927	1,077,493	99.4	33.0	74.6	5,277	5,852
	DAYTON POWER & LIGHT	255,546	252,591	71.2	29.8	N/A	4,917	5,746
	EAST OHIO GAS CO.	970,137	961,216	104.0	42.0	95.0	5,541	6,274
	OHIO GAS CO.	30,790	27,700	80.0	35.0	66.0	5,669	6,280
	WEST OHIO GAS CO.	52,492	51,690	89.7	22.3	87.6	5,277	5,910
WISCONSIN								
	MADISON GAS & ELECTRIC	77,462	72,061	76.4	27.0	73.0	6,688	7,642
	SUPERIOR WATER, LIGHT & POWER	8,589	6,679	103	24	N/A	9,142	9,830
	WISCONSIN FUEL & LIGHT CO.	38,571	37,204	80.3	27.4	77.5	7,911	7,920
	WISCONSIN GAS CO.	409,977	370,663	93.5	30.4	79.0	6,103	7,196
	WISCONSIN NATURAL GAS CO.	229,628	217,062	106.0	25.0	71.0	6,451	7,451
	WISCONSIN POWER & LIGHT CO.	106,479	99,624	89.0	22.0	N/A	6,865	7,472
	WISCONSIN PUBLIC SERVICE	156,481	150,215	87.0	33.0	N/A	7,171	8,022
	WISCONSIN SOUTHERN GAS CO.	40,192	39,095	81.4	24.6	73.0	6,303	6,922
WEST NORTH CENTRAL								
IOWA								
	IOWA ELECTRIC LIGHT & POWER	106,705	104,592	103.0	38.0	98.0	6,363	7,013
	IOWA PUBLIC SERVICE CO.	239,821	226,470	104.0	27.6	N/A	6,439	7,268
	IOWA-ILLINOIS GAS & ELECTRIC	153,747	149,564	68.4	35.9	86.0	5,687	6,502
	PEOPLES NATURAL GAS (UTILICORP)	108,293	107,751	78.0	25.0	N/A	6,311	7,088
	UNITED CITIES GAS CO.	4,075	4,050	N/A	N/A	91.0	4,942	5,654
KANSAS								
	ARKANSAS LOUISIANA GAS CO.	19,708	17,580	52.4	31.6	84.0	4,296	4,787
	K N ENERGY, INC.	22,712	21,750	79.3	30.6	N/A	5,677	6,099
	KANSAS PUBLIC SERVICE	23,691	23,691	N/A	N/A	91.5	4,042	4,929
	MIDWEST ENERGY, INC.	9,789	9,789	94.2	30.8	90.0	5,172	5,300
	PEOPLES NATURAL GAS (UTILICORP)	31,910	31,750	71.0	31.0	N/A	4,895	5,432
	UNITED CITIES GAS CO.	62,109	62,100	N/A	N/A	60.0	4,228	4,902
MINNESOTA								
	AUSTIN UTILITIES	9,587	9,522	127.6	3.6	73.9	7,108	7,774
	CITY OF DULUTH	19,989	14,088	140.0	45.0	56.4	9,901	9,830
	IOWA PUBLIC SERVICE CO.	61,606	61,515	118.2	29.2	N/A	6,439	7,268
	MINNEGASCO, INC.	446,763	437,888	119.0	35.0	87	7,946	8,106
	NORTHERN STATES POWER CO.	254,309	239,501	116.5	15.9	N/A	7,183	7,892
	PEOPLES NATURAL GAS (UTILICORP)	94,110	93,639	81.0	25.0	N/A	7,715	8,662
MISSOURI								
	ASSOCIATED NATURAL GAS CO.	38,119	26,683	61	23	41	3,586	4,209
	CITY OF SPRINGFIELD	57,026	57,026	65.0	26.0	88.0	3,967	4,660
	LACLEDE GAS CO.	558,507	544,431	60.8	39.8	77.0	3,839	4,885
	ST. JOSEPH LIGHT & POWER CO.	5,231	5,267	N/A	N/A	N/A	4,909	5,459
	UNITED CITIES GAS CO.	12,000	11,950	N/A	N/A	78.0	4,942	5,654
NEBRASKA								
	HASTINGS UTILITIES	8,713	8,702	95.1	N/A	N/A	5,480	5,868
	IOWA PUBLIC SERVICE CO.	3,527	3,390	94.1	27.5	N/A	6,439	7,268
	K N ENERGY, INC.	78,748	77,173	76.4	22.9	N/A	6,509	6,702
	METROPOLITAN UTILITIES DIST.	136,148	133,516	73.0	34.0	95.0	5,633	6,592
	MINNEGASCO, INC.	110,268	108,695	61.4	29.9	84	5,362	6,093
	NORTHWESTERN PUBLIC SERVICE	33,061	32,886	78.0	39.0	80.0	5,725	6,541
	PEOPLES NATURAL GAS (UTILICORP)	32,011	31,851	69.0	25.0	N/A	5,775	6,531
NORTH DAKOTA								
	MONTANA-DAKOTA UTILITIES CO.	63,603	61,941	85.4	30.4	95.7	8,061	9,075
	NORTHERN STATES POWER CO.	21,870	19,104	109.6	18.4	N/A	8,485	9,323
SOUTH DAKOTA								
	IOWA PUBLIC SERVICE CO.	7,492	7,061	97.7	24.5	N/A	6,439	7,268
	MINNEGASCO, INC.	38,398	38,161	81.0	32.0	90	7,191	7,816

DIVISION / STATE	COMPANY	RESIDENTIAL CUSTOMERS YEAR-END 1990	HOUSEHEATING CUSTOMERS YEAR-END 1990	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) HEATING	BASELOAD	GAS-HTG MKT-SHARE (%)	HEATING DEGREE DAYS 1990	30 YEAR NORMAL
	MONTANA-DAKOTA UTILITIES CO.	28,101	26,467	62.3	30.6	93.4	6,749	7,301
	NORTHWESTERN PUBLIC SERVICE	26,350	25,249	86.0	29.4	68.6	6,974	8,087
SOUTH ATLANTIC								
DELAWARE								
	CHESAPEAKE UTILITIES CORP.	11,416	9,018	99.0	28.0	N/A	3,984	4,643
	DELMARVA POWER & LIGHT CO.	78,893	60,910	100.6	27.0	38.7	4,015	4,947
DISTRICT OF COLUMBIA								
	WASHINGTON GAS LIGHT CO.	133,870	105,325	85.0	29.0	74.0	3,562	3,875
FLORIDA								
	PEOPLES GAS SYSTEM, INC.	158,920	132,009	27	25	40.0	122	181
GEORGIA								
	ATLANTA GAS LIGHT COMPANY	1,099,805	1,087,709	48.8	31.2	74.0	2,426	3,021
	UNITED CITIES GAS CO.	62,681	56,400	N/A	N/A	91.0	1,650	2,356
MARYLAND								
	BALTIMORE GAS & ELECTRIC	482,680	359,448	109.4	39.4	39.1	3,755	4,706
	CHESAPEAKE UTILITIES CORP.	5,874	4,508	100.0	20.0	N/A	4,142	4,000
	COLUMBIA GAS OF MD	26,834	23,725	93.0	27.0	45.0	4,504	5,045
	WASHINGTON GAS LIGHT CO.	249,366	237,098	83.4	28.5	60.0	3,562	3,875
NORTH CAROLINA								
	CITY OF WILSON	6,646	6,646	68.5	3.7	25.7	90	N/A
	NORTH CAROLINA NATURAL GAS	70,739	68,289	60	32	85.0	2,185	3,155
	PIEDMONT NATURAL GAS CO.	194,200	57,177	7.5	19.7	N/A	2,697	3,701
	PUBLIC SERVICE OF NC	208,490	196,538	82.0	22.9	31.9	2,473	3,339
SOUTH CAROLINA								
	PIEDMONT NATURAL GAS CO.	55,093	25,993	7.2	14.0	41.3	2,638	3,392
	SOUTH CAROLINA ELECTRIC & GAS	191,062	M/A	N/A	N/A	N/A	1,499	2,384
	UNITED CITIES GAS CO.	3,907	3,500	N/A	N/A	34.0	2,532	3,239
VIRGINIA								
	CITY OF CHARLOTTESVILLE	13,126	13,382	80.0	75.0	N/A	4,742	N/A
	CITY OF RICHMOND	77,759	52,197	85.0	34.0	N/A	3,547	3,960
	COMMONWEALTH GAS SERVICES	118,987	113,840	72.7	27.3	37.8	3,336	3,889
	UNITED CITIES GAS CO.	11,372	10,349	N/A	N/A	38.0	3,271	4,315
	VIRGINIA NATURAL GAS	182,357	182,357	22.7	42.0	39.6	3,340	3,561
	WASHINGTON GAS LIGHT CO.	213,257	201,264	70.5	28.5	54.0	3,562	3,875
WEST VIRGINIA								
	HOPE GAS CO.	101,561	100,015	69.5	43.8	97.0	4,554	4,957
	MOUNTAINEER GAS CO.	181,579	N/A	60.0	40.0	N/A	4,250	5,200
EAST SOUTH CENTRAL								
ALABAMA								
	ALABAMA GAS CORP.	403,228	386,560	51.4	26.3	71.6	2,478	2,650
	CITY OF FLORENCE	9,686	9,686	N/A	N/A	31.4	2,107	N/A
	DECATUR UTILITIES	5,920	5,680	49.0	11.0	27.0	3,329	3,302
	HUNTSVILLE UTILITIES GAS DEPT.	26,577	26,577	102.6	N/A	N/A	2,545	3,340
	MOBILE GAS SERVICE CORP.	83,056	72,498	55.2	30.0	60.0	1,203	1,620
	SOUTHEAST ALABAMA GAS DISTRICT	30,000	22,500	7.5	3.4	N/A	1,424	1,800
KENTUCKY								
	COLUMBIA GAS OF KY	110,294	109,672	88.5	26.8	70.5	4,107	4,606
	DELTA NATURAL GAS CO.	26,617	25,286	65.0	25.0	N/A	3,914	4,750
	LOUISVILLE GAS & ELECTRIC	226,440	223,990	71.0	33.0	78.0	3,732	4,525
	UNION LIGHT, HEAT & POWER	60,346	57,564	102.5	41.0	53	4,492	5,247
	WESTERN KENTUCKY GAS CO.	135,593	127,368	82.0	18.0	35.0	3,576	4,729
MISSISSIPPI								
	ENTEX, INC.	98,510	98,402	40.0	26.0	87.0	2,002	2,250
	MISSISSIPPI VALLEY GAS CO.	208,213	207,543	44.9	30.0	78.3	2,583	2,869
TENNESSEE								
	MEMPHIS LIGHT, GAS & WATER	244,864	239,967	77.0	30.0	77.0	2,853	3,227
	MIDDLE TENNESSEE NATURAL GAS	20,377	19,615	48.0	13.0	69.0	2,889	3,655
	NASHVILLE GAS CO.	74,064	74,064	85.0	30.0	32.0	2,955	3,756
	UNITED CITIES GAS CO.	60,317	54,888	N/A	N/A	50.0	2,889	3,756
WEST SOUTH CENTRAL								
ARKANSAS								
	ARKANSAS LOUISIANA GAS CO.	362,754	323,577	49.3	29.7	57.0	2,556	3,152
	ARKANSAS OKLAHOMA GAS CORP.	49,508	N/A	59.5	23.6	N/A	2,923	3,477
	ARKANSAS WESTERN GAS CO.	72,202	67,870	55.0	37.0	45.0	3,972	3,948
	ASSOCIATED NATURAL GAS CO.	17,708	12,396	59	22	50	2,945	3,432
LOUISIANA								

DIVISION STATE	COMPANY	RESIDENTIAL CUSTOMERS YEAR-END 1990	HOUSEHEATING CUSTOMERS YEAR-END 1990	CONSUMPTION PER SINGLE FAMILY HOME (MCF/YR) HEATING	BASELOAD	GAS-HTG MKT-SHARE (%)	HEATING DEGREE DAYS 1990	30 YEAR NORMAL
	ARKANSAS LOUISIANA GAS CO.	122,267	109,062	43.1	25.9	64.0	1,791	2,269
	ENTEX, INC.	128,583	115,725	36.0	37.0	90.0	1,080	1,530
	LOUISIANA GAS SERVICE CO.	222,397	223,087	55.3	25.9	90.8	1,049	1,452
OKLAHOMA								
	ARKANSAS LOUISIANA GAS CO.	101,480	90,520	46.2	27.8	54.0	3,100	3,735
	ARKANSAS OKLAHOMA GAS CORP.	13,625	13,625	49.0	20.0	N/A	2,923	3,477
	LONE STAR GAS CO.	31,786	28,290	41.0	26.0	58.0	2,069	2,407
	OKLAHOMA NATURAL GAS CO.	592,446	603,738	62.6	31.0	89.0	3,210	3,440
TEXAS								
	ARKANSAS LOUISIANA GAS CO.	41,673	37,172	40.1	24.9	60.0	1,791	2,269
	CITY PUBLIC SERVICE	264,686	227,630	27.6	25.4	62.4	1,273	1,606
	ENTEX, INC.	1,001,548	942,209	32.0	27.0	68.9	1,262	1,580
	LONE STAR GAS CO.	1,109,091	987,091	41.0	26.0	58.0	2,069	2,407
	SOUTHERN UNION GAS CO.	317,930	320,130	29.0	34.0	91.0	2,223	2,223
MOUNTAIN								
ARIZONA								
	CITIZENS UTILITIES CO.	5,995	5,348	40.0	31.8	98.7	2,248	2,720
	SOUTHWEST GAS CORP.	499,863	440,731	27.4	19.5	72.0	1,358	1,257
COLORADO								
	CITY OF COLORADO SPRINGS	105,505	105,505	61.9	31.5	81.0	6,120	6,345
	K N ENERGY, INC.	5,235	5,130	79.5	25.8	N/A	5,812	5,969
	PEOPLES NATURAL GAS (UTILICORP)	23,773	23,654	87.0	36.0	N/A	5,788	6,159
	PUBLIC SERVICE OF COLORADO	757,420	757,420	73.0	27.3	94.1	5,472	5,963
IDAHO								
	INTERMOUNTAIN GAS CO.	104,814	104,814	53.9	18.2	36.0	5,807	6,244
	WASHINGTON WATER POWER	19,315	17,378	70.8	9.1	28.9	6,550	6,882
MONTANA								
	GREAT FALLS GAS CO.	20,996	20,996	67.4	27.2	97.7	7,338	7,607
	MONTANA-DAKOTA UTILITIES CO.	54,553	52,313	68.8	31.3	94.6	6,607	7,212
NEVADA								
	SIERRA PACIFIC POWER COMPANY	69,643	69,618	61.0	25.0	70.0	5,175	5,808
	SOUTHWEST GAS CORP.	202,392	179,151	27.4	19.5	41.0	3,073	3,208
NEW MEXICO								
	GAS COMPANY OF NEW MEXICO	312,299	312,299	81.8	N/A	N/A	4,486	4,621
UTAH								
	MOUNTAIN FUEL SUPPLY CO.	448,587	439,348	72.3	36.4	86.3	5,520	5,801
WYOMING								
	CODY GAS COMPANY	4,480	3,839	67.0	42.6	100.0	6,367	7,332
	K N ENERGY, INC.	8,816	8,640	76.9	27.4	N/A	7,241	7,642
	MONTANA-DAKOTA UTILITIES CO.	10,621	9,402	75.2	37.6	94.2	7,333	7,841
	MOUNTAIN FUEL SUPPLY CO.	17,247	17,058	82.6	31.6	72.3	8,076	8,597
	WYOMING GAS CO.	5,636	5,636	N/A	30.7	77.0	7,066	7,581
PACIFIC								
CALIFORNIA								
	CITY OF LONG BEACH	147,279	133,526	23.0	34.0	73.0	1,086	1,188
	PACIFIC GAS AND ELECTRIC	3,249,828	2,370,000	34.1	21.7	70.0	1,753	1,838
	SAN DIEGO GAS & ELECTRIC	645,771	637,777	22.0	23.0	71.0	1,172	1,081
	SOUTHERN CALIFORNIA GAS CO.	4,381,559	4,250,112	23.3	30.5	94.1	1,328	1,528
	SOUTHWEST GAS CORP.	79,062	77,085	37.2	24.4	78.0	3,394	3,563
OREGON								
	CASCADE NATURAL GAS CORP.	18,776	15,376	60.0	21.0	70.0	5,423	N/A
	NORTHWEST NATURAL GAS CO.	272,550	259,652	62.6	24.0	35.0	4,391	4,409
WASHINGTON								
	CASCADE NATURAL GAS CORP.	69,373	65,766	60.0	22.0	70.0	5,423	N/A
	NORTHWEST NATURAL GAS CO.	8,715	8,176	86.6	24.0	13.0	4,208	4,391
	WASHINGTON NATURAL GAS CO.	333,038	328,195	73.6	21.4	30.0	4,777	4,827
	WASHINGTON WATER POWER	61,756	61,131	84.7	9.3	39.5	6,550	6,882

Appendix 2
Competitive Fuel Prices

APPENDIX 2 -- COMPETITIVE FUEL PRICES

DIVISION / STATE	COMPANY	PRINCIPAL CITY SERVED	AS OF DECEMBER 31, 1990 NATURAL GAS	FUEL OIL	ELECTRIC	PROPANE	GAS HTG. BILL	COMPETITIVE FUEL
NEW ENGLAND								
CONNECTICUT								
	SOUTHERN CONNECTICUT GAS CO.	BRIDGEPORT	$9.33	$8.82	$30.77	NA	$733.33	OIL
	YANKEE GAS SERVICES CO.	WATERBURY	$8.29	$8.80	$24.62	NA	$773.80	OIL
MAINE								
	NORTHERN UTILITIES	PORTLAND	$6.34	$7.86	$33.41	$14.41	$443.80	OIL
MASSACHUSETTS								
	BAY STATE GAS COMPANY	BROCKTON	$7.64	$8.26	$24.65	$14.41	$659.33	OIL
	BERKSHIRE GAS COMPANY	PITTSFIELD	$8.15	$7.86	$32.24	$11.46	$978.00	OIL
	BOSTON GAS CO.	BOSTON	$7.91	$8.48	$28.26	$14.19	$838.46	OIL
	COLONIAL GAS CO. - CAPE COD	CAPE COD	$8.44	$8.35	$35.46	$15.28	$717.40	OIL
	COLONIAL GAS CO. - LOWELL	LOWELL	$7.24	$6.01	$24.91	$14.19	$651.78	OIL
	COMMONWEALTH GAS CO.	WORCESTER	$7.35	$8.35	$26.08	$14.19	$882.00	OIL
	ESSEX COUNTY GAS CO.	HAVERHILL	$8.81	$7.35	$17.02	NA	$681.89	OIL
	FALL RIVER GAS CO.	FALL RIVER	$6.79	$6.55	$32.24	$9.83	$712.95	OIL
NEW HAMPSHIRE								
	NORTHERN UTILITIES	PORTSMOUTH	$8.10	$8.41	$31.68	$11.90	$839.97	OIL
RHODE ISLAND								
	PROVIDENCE GAS CO.	PROVIDENCE	$6.64	$8.29	$26.39	$12.55	$536.82	OIL
	VALLEY GAS CO.	PAWTUCKET	$6.19	$8.62	$32.24	$15.07	$464.25	
VERMONT								
	VERMONT GAS SYSTEMS	BURLINGTON	$5.76	$7.68	$22.71	$13.76	$576.00	OIL
MIDDLE ATLANTIC								
NEW JERSEY								
	ELIZABETHTOWN GAS CO.	ELIZABETH	$7.01	$8.65	$31.97	$13.10	$637.91	OIL
	NEW JERSEY NATURAL GAS COMPANY	ASBURY PARK	$8.60	$8.62	$23.97	$13.32	$618.58	OIL
	PUBLIC SERVICE ELECTRIC & GAS	NEWARK	$6.63	$8.35	$29.31	$15.83	$507.20	OIL
	SOUTH JERSEY GAS CO.	ATLANTIC CITY	$6.08	$5.45	$23.23	NA	$364.80	OIL
NEW YORK								
	BROOKLYN UNION GAS CO.	NEW YORK CITY	$7.37	$8.84	$22.66	NA	$714.89	OIL
	CENTRAL HUDSON GAS & ELECTRIC	POUGHKEEPSIE	$6.37	$8.88	$31.36	NA	$388.57	OIL
	COLUMBIA GAS OF NEW YORK	BINGHAMTON	$0.00	$0.00	$28.43	NA	NA	OIL
	CONSOLIDATED EDISON CO.	NEW YORK CITY	$8.15	$9.14	$35.17	NA	$815.00	OIL
	LONG ISLAND LIGHTING CO.	LONG ISLAND	$5.50	$9.48	$41.65	NA	$775.10	OIL
	NATIONAL FUEL GAS DIST.	NEW YORK	$6.38	$7.68	$22.86	$14.19	$844.07	OIL
	NIAGARA MOHAWK POWER CO.	SYRACUSE	$6.00	$8.24	$23.45	$13.08	$587.74	OIL
	ORANGE & ROCKLAND UTILITIES	CLARKSTOWN	$7.91	$4.66	$30.59	$5.16	$607.70	OIL
	ROCHESTER GAS & ELECTRIC	ROCHESTER	$5.48	$5.68	$28.43	NA	$476.76	ELECTRICITY
	ST. LAWRENCE GAS CO.	MASSENA	$4.44	$7.88	$11.72	NA	$594.96	OIL
PENNSYLVANIA								
	COLUMBIA GAS OF PA	PITTSBURGH	$6.19	$5.88	$33.97	$12.55	$632.18	ELECTRICITY
	EQUITABLE RESOURCES	PITTSBURGH	$7.37	$5.88	$37.37	$12.55	$663.73	ELECTRICITY
	NATIONAL FUEL GAS DIST.	ERIE	$5.26	$7.55	$20.22	$14.30	$745.87	OIL
	NORTH PENN GAS CO.	RURAL	$5.10	$6.51	$20.22	$14.19	$397.80	OIL
	PENNSYLVANIA GAS & WATER	SCRANTON	$5.29	$8.02	$20.93	$12.34	$660.85	ELECTRICITY
	PEOPLES NATURAL GAS CO.	PITTSBURGH	$6.34	$7.35	$26.93	$15.28	$465.30	ELECTRICITY
	PHILADELPHIA ELECTRIC CO.	UPPER DARBY	$6.43	NA	$40.45	NA	$578.58	ELECTRICITY
	PHILADELPHIA GAS WORKS	PHILADELPHIA	$6.96	$9.69	$19.58	$10.92	$870.00	ELECTRICITY
	PIKE COUNTY LIGHT & POWER	MILFORD	$4.92	$4.66	$28.48	$5.16	$359.40	OIL
	UGI CORPORATION	READING	$6.10	$7.15	$25.21	$11.42	$457.50	OIL
EAST NORTH CENTRAL								
ILLINOIS								
	ILLINOIS POWER CO.	DECATUR	$5.86	NA	$20.46	NA	$452.62	ELECTRICITY
	IOWA-ILLINOIS GAS & ELECTRIC	ROCK ISLAND	$4.82	$5.48	$20.86	$6.39	$356.68	PROPANE
	NORTH SHORE GAS CO.	WAUKEGAN	$4.96	$6.84	$13.30	NA	$679.52	ELECTRICITY
	NORTHERN ILLINOIS GAS CO.	ROCKFORD	$3.78	$7.50	$12.02	$9.40	$415.80	ELECTRICITY
	PEOPLES GAS LIGHT & COKE	CHICAGO	$5.59	$6.83	$13.45	NA	$793.92	ELECTRICITY
	UNITED CITIES GAS CO.	VIRDEN	$5.51	$5.68	$17.56	NA	$578.55	
	WISCONSIN POWER & LIGHT	SOUTH BELOIT	$4.30	$7.88	$17.91	NA	$378.75	
INDIANA								
	CITIZENS GAS & COKE UTILITY	INDIANAPOLIS	$4.62	$6.81	$9.96	$8.62	$420.42	ELECTRICITY
	KOKOMO GAS & FUEL CO.	KOKOMO	$5.86	$5.01	$14.95	$9.28	$505.22	ELECTRICITY
	LAWRENCEBURG GAS CO.	LAWRENCEBURG	$8.05	$7.28	$19.49	$13.32	$825.23	ELECTRICITY

DIVISION / STATE	COMPANY	PRINCIPAL CITY SERVED	AS OF DECEMBER 31, 1990 NATURAL GAS	FUEL OIL	ELECTRIC	PROPANE	GAS HTG. BILL	COMPETITIVE FUEL
	NORTHERN INDIANA PUBLIC SERV.	FORT WAYNE	$4.99	$7.45	$20.95	$11.06	NA	NA
	OHIO VALLEY GAS CORP.	PORTLAND	$3.98	$6.01	$17.56	$8.19	$421.88	ELECTRICITY
MICHIGAN								
	BATTLE CREEK GAS COMPANY	BATTLE CREEK	$4.72	$8.15	$21.98	$11.46	$566.40	ELECTRICITY
	CONSUMERS POWER CO.	FLINT	$4.31	$7.01	$19.93	$12.55	$362.30	PROPANE
	MICHIGAN CONSOLIDATED GAS	DETROIT	$5.27	$7.88	$27.56	$11.14	$580.03	OIL
	MICHIGAN GAS CO.	HOLLAND	$4.22	$7.75	$17.58	$12.01	$505.82	OIL
	MICHIGAN GAS UTILITIES CO.	MONROE	$4.34	$7.55	$23.45	$10.26	$368.90	ELECTRICITY
	WISCONSIN PUBLIC SERVICE	MENOMINEE	$5.55	$6.68	$17.82	$10.81	$571.65	PROPANE
OHIO								
	CINCINNATI GAS & ELECTRIC	CINCINNATI	$4.70	$7.28	$19.40	$13.32	$481.46	ELECTRICITY
	COLUMBIA GAS OF OHIO	COLUMBUS	$5.54	$7.28	$16.53	$16.53	$550.45	ELECTRICITY
	DAYTON POWER & LIGHT	DAYTON	$5.82	$5.35	$20.69	$13.69	$414.10	OIL
	EAST OHIO GAS CO.	CLEVELAND	$4.67	$5.74	$31.65	$9.28	$485.68	ELECTRICITY
	OHIO GAS CO.	BRYAN	$5.50	$6.28	$23.45	$8.30	$440.00	ELECTRICITY
	WEST OHIO GAS CO.	LIMA	$5.37	$7.54	$19.05	$11.20	$481.69	ELECTRICITY
WISCONSIN								
	MADISON GAS & ELECTRIC	MADISON	$5.65	$6.95	$19.46	$9.48	$459.83	OIL
	SUPERIOR WATER, LIGHT & POWER	SUPERIOR	$4.96	$7.88	$17.91	$10.48	$431.52	PROPANE
	WISCONSIN FUEL & LIGHT CO.	WAUSAU	$5.59	$7.95	$17.00	$9.83	$448.48	OIL
	WISCONSIN GAS CO.	MILWAUKEE	$6.00	$8.01	$18.76	$9.60	$561.19	OIL
	WISCONSIN NATURAL GAS CO.	RACINE	$5.62	$8.15	$17.85	$10.37	$595.72	OIL
	WISCONSIN POWER & LIGHT CO.	JANESVILLE	$5.86	$7.88	$17.91	$10.48	$521.54	OIL
	WISCONSIN PUBLIC SERVICE	GREEN BAY	$4.96	$7.88	$17.91	$10.48	$431.52	PROPANE
	WISCONSIN SOUTHERN GAS CO.	LAKE GENEVA	$5.65	$6.95	$19.46	$9.48	$459.83	ELECTRICITY
WEST NORTH CENTRAL								
IOWA								
	IOWA ELECTRIC LIGHT & POWER	MUSCATINE	$5.21	$6.48	$26.49	$7.31	$536.63	
	IOWA PUBLIC SERVICE CO.	DES MOINES	$5.46	$3.01	$22.33	$4.79	$567.84	ELECTRICITY
	IOWA–ILLINOIS GAS & ELECTRIC	DAVENPORT	$4.19	$5.48	$18.28	$6.39	$286.60	PROPANE
	PEOPLES NATURAL GAS (UTILICORP)	DUBUQUE	$5.04	$6.61	$23.27	$9.28	$393.12	NA
	UNITED CITIES	KEOKUK	$7.58	$4.68	$20.52	$8.19	$606.40	
KANSAS								
	ARKANSAS LOUISIANA GAS CO.	WICHITA	$3.62	NA	$28.00	$8.06	$189.53	ELECTRICITY
	K N ENERGY, INC.	COLBY	$3.83	NA	NA	NA	$303.56	ELECTRICITY
	KANSAS PUBLIC SERVICE	LAWRENCE	$3.30	$4.81	$16.76	$6.54	$255.80	ELECTRICITY
	MIDWEST ENERGY, INC.	HAYS	$3.79	NA	$20.81	$5.56	$356.88	ELECTRICITY
	PEOPLES NATURAL GAS (UTILICORP)	DODGE CITY	$3.82	$6.61	$27.11	$9.28	$271.22	NA
	UNITED CITIES	OLATHE	$4.25	$5.68	$14.65	$9.83	$318.75	
MINNESOTA								
	AUSTIN UTILITIES	AUSTIN	$4.74	$6.61	$21.42	$8.85	$605.28	
	CITY OF DULUTH	DULUTH	$4.50	$6.01	$15.39	$9.28	$630.00	OIL
	IOWA PUBLIC SERVICE CO.	COON RAPIDS	$4.99	$3.34	$17.64	$4.86	$589.82	ELECTRICITY
	MINNEGASCO, INC.	MINNEAPOLIS	$4.55	$7.41	$19.11	$9.28	$541.45	ELECTRICITY
	NORTHERN STATES POWER CO.	ST PAUL	$5.06	$6.57	$18.92	$8.54	$590.05	OIL
	PEOPLES NATURAL GAS (UTILICORP)	ROCHESTER	$4.68	$6.61	$19.67	$9.28	$379.06	NA
MISSOURI								
	ASSOCIATED NATURAL GAS CO.	SIKESTON	$5.01	$8.02	$17.58	$11.03	$305.61	ELECTRICITY
	CITY OF SPRINGFIELD	SPRINGFIELD	$4.59	$5.45	$14.03	$8.52	$298.16	ELECTRICITY
	LACLEDE GAS CO.	ST. LOUIS	$4.71	$8.48	$13.18	$10.70	$286.37	ELECTRICITY
	UNITED CITIES	HANNIBAL	$5.56	$4.68	$14.65	$8.19	$333.60	
NEBRASKA								
	HASTINGS UTILITIES	HASTINGS	$4.12	NA	$18.17	NA	$391.64	NA
	IOWA PUBLIC SERVICE CO.	SOUTH SIOUX CIT	$5.79	$3.01	$20.52	$4.79	$544.84	ELECTRICITY
	K N ENERGY, INC.	SCOTTSBLUFF	$5.03	NA	NA	NA	$384.22	ELECTRICITY
	METROPOLITAN UTILITIES DIST.	OMAHA	$4.58	$8.81	$14.07	$10.15	$334.41	ELECTRICITY
	MINNEGASCO, INC.	LINCOLN	$5.28	$6.61	$11.72	$9.28	$324.19	ELECTRICITY
	NORTHWESTERN PUBLIC SERVICE	GRAND ISLAND	$4.28	$5.81	$8.65	$5.46	$333.45	ALL
	PEOPLES NATURAL GAS (UTILITICORP)	BELLEVUE	$4.86	$6.61	$16.12	$9.28	$335.34	
NORTH DAKOTA								
	MONTANA–DAKOTA UTILITIES CO.	BISMARK	$4.13	$6.01	$22.27	$7.42	$352.62	ELECTRICITY
	NORTHERN STATES POWER CO.	FARGO	$4.93	$6.57	$15.00	$8.54	$540.07	OIL
SOUTH DAKOTA								
	IOWA PUBLIC SERVICE CO.	YANKTON	$5.11	$3.01	$19.52	$4.79	$499.25	ELECTRICITY
	MINNEGASCO, INC.	SIOUX FALLS	$5.56	$6.68	$19.34	$9.39	$450.36	ELECTRICITY
	MONTANA–DAKOTA UTILITIES CO.	RAPID CITY	$4.63	$6.21	$16.41	$10.14	$288.39	ELECTRICITY
	NORTHWESTERN PUBLIC SERVICE	ABERDEEN	$4.60	$4.34	$8.50	$4.48	$404.80	ALL

DIVISION / STATE	COMPANY	PRINCIPAL CITY SERVED	AS OF DECEMBER 31, 1990 NATURAL GAS	FUEL OIL	ELECTRIC	PROPANE	GAS HTG. BILL	COMPETITIVE FUEL
SOUTH ATLANTIC								
DELAWARE								
	CHESAPEAKE UTILITIES CORP.	DOVER	$7.39	$7.68	$20.22	$14.30	$731.61	ELECTRICITY
	DELMARVA POWER & LIGHT CO.	WILMINGTON	$5.51	$7.82	$15.04	$12.77	$553.80	PROPANE
DISTRICT OF COLUMBIA								
	WASHINGTON GAS LIGHT CO.	WASHINGTON	$7.86	$7.75	$20.38	NA	$668.10	ELECTRICITY
FLORIDA								
	PEOPLES GAS SYSTEM, INC.	MIAMI	$7.94	$8.35	$24.91	$12.55	$214.41	ELECTRICITY
GEORGIA								
	ATLANTA GAS LIGHT COMPANY	ATLANTA	$6.67	$5.99	$20.63	$9.96	$325.50	ELECTRICITY
	UNITED CITIES GAS CO.	COLUMBUS	$5.34	$5.68	$20.52	$10.37	$241.37	
MARYLAND								
	BALTIMORE GAS & ELECTRIC	BALTIMORE	$5.92	$8.62	$25.00	$10.97	$647.65	ELECTRICITY
	CHESAPEAKE UTILITIES CORP.	SALISBURY	$5.23	$8.28	$21.98	$14.19	$523.00	
	COLUMBIA GAS OF MD	CUMBERLAND	$6.04	$0.00	$15.71	NA	$561.72	ELECTRICITY
	WASHINGTON GAS LIGHT CO.	HYATTSVILLE	$5.89	$7.75	$10.75	NA	$491.23	ELECTRICITY
NORTH CAROLINA								
	CITY OF WILSON	WILSON	$6.09	$8.02	$22.61	$12.01	$416.70	OIL
	NORTH CAROLINA NATURAL GAS	FAYETTVILLE	$4.88	$8.02	$23.45	$12.01	$292.93	ELECTRICITY
	PIEDMONT NATURAL GAS CO.	CHARLOTTE	$5.20	$5.95	$20.11	$10.70	$299.17	ELECTRICITY
	PUBLIC SERVICE OF NC	RALEIGH	$5.15	$5.68	$22.86	$10.15	$422.30	ELECTRICITY
SOUTH CAROLINA								
	PIEDMONT NATURAL GAS CO.	GREENVILLE	$5.65	$5.95	$18.07	$10.70	$378.80	ELECTRICITY
	SOUTH CAROLINA ELECTRIC & GAS	COLUMBIA	$7.68	$8.48	$121.83	$10.65	$537.51	ELECTRICITY
	UNITED CITIES GAS CO.	GAFFNEY	$5.34	$5.34	$20.52	$10.37	$365.79	ELECTRICITY
VIRGINIA								
	CITY OF CHARLOTTESVILLE	CHARLOTTESVILL	$5.61	$8.68	$17.58	$15.94	$448.80	
	CITY OF RICHMOND	RICHMOND	$6.51	$5.34	$21.98	$10.92	$553.35	
	COMMONWEALTH GAS SERVICES	PORTSMOUTH	$7.08	$7.01	$17.79	$12.55	$504.80	ELECTRICITY
	UNITED CITIES GAS CO.	BRISOL	$6.10	$5.68	$16.12	$10.37	$457.50	ELECTRICITY
	VIRGINIA NATURAL GAS	NORFOLK	$7.31	$8.28	$17.58	$14.74	$531.11	ELECTRICITY
	WASHINGTON GAS LIGHT CO.	ALEXANDRIA	$7.16	$7.75	$17.52	$13.65	$504.78	ELECTRICITY
WEST VIRGINIA								
	HOPE GAS CO.	PARKERSBURG	$6.95	$5.54	$17.13	$11.90	$483.11	ELECTRICITY
	MOUNTAINEER GAS CO.	CHARLESTON	$5.60	$6.68	$16.71	$13.10	$336.00	
EAST SOUTH CENTRAL								
ALABAMA								
	ALABAMA GAS CORP.	BIRMINGHAM	$6.00	NA	$19.58	$10.04	$308.40	ELECTRICITY
	CITY OF FLORENCE	FLORENCE	$5.68	$5.14	$16.91	$9.39	$297.06	ELECTRICITY
	DECATUR UTILITIES	DECATUR	$3.56	NA	$16.36	$12.01	$174.53	ELECTRICITY
	HUNTSVILLE UTILITIES GAS DEPT.	HUNTSVILLE	$4.75	$6.35	$14.78	$10.26	$487.39	NA
	MOBILE GAS SERVICE CORP.	MOBILE	$6.53	NA	$22.92	$13.65	$360.46	
	SOUTHEAST ALABAMA GAS DISTRICT	ANDALUSIA	$6.80	$8.68	$23.45	$10.92	$391.00	
KENTUCKY								
	COLUMBIA GAS OF KY	LEXINGTON	$5.45	$6.55	$13.92	$12.01	$388.04	ELECTRICITY
	DELTA NATURAL GAS CO.	WINCHESTER	$5.69	$5.34	$14.65	$9.83	$369.85	ELECTRICITY
	LOUISVILLE GAS & ELECTRIC	LOUISVILLE	$3.74	$7.23	$14.73	$14.74	$265.61	ELECTRICITY
	UNION LIGHT, HEAT & POWER	COVINGTON	$5.21	$7.26	$16.71	$13.32	$534.45	ELECTRICITY
	WESTERN KENTUCKY GAS CO.	OWENSBORO	$4.14	$4.54	$12.60	$9.38	$339.52	
MISSISSIPPI								
	ENTEX, INC.	GULFPORT	$5.24	$4.61	$16.79	$8.62	$209.60	ELECTRICITY
	MISSISSIPPI VALLEY GAS CO.	JACKSON	$5.03	NA	$22.71	$10.37	$225.85	ELECTRICITY
TENNESSEE								
	MIDDLE TENNESSEE NATURAL GAS	SMITHVILLE	$5.00	$5.41	$15.53	$12.98	$240.00	ELECTRICITY
	NASHVILLE GAS CO.	NASHVILLE	$5.45	$7.01	$17.00	$13.43	$463.25	ELECTRICITY
	MEMPHIS LIGHT GAS CO.	MEMPHIS	$5.60	NA	$16.24	$10.81	$431.20	
	UNITED CITIES GAS CO.	BRISTOL	$6.24	$5.68	$16.12	$10.37	$453.02	ELECTRICITY
WEST SOUTH CENTRAL								
	ARKANSAS LOUISIANA GAS CO.	LITTLE ROCK	$4.31	NA	$14.14	$11.57	$212.38	ELECTRICITY
	ARKANSAS OKLAHOMA GAS CORP.	FORT SMITH	$3.81	NA	$9.79	$9.83	$226.65	ELECTRICITY
	ARKANSAS WESTERN GAS CO.	FAYETTEVILLE	$4.28	$7.62	$18.49	$10.70	$235.40	ELECTRICITY
	ASSOCIATED NATURAL GAS CO.	BLYTHEVILLE	$4.81	$7.82	$26.38	$11.03	$283.79	ELECTRICITY
LOUISIANA								
	ARKANSAS LOUISIANA GAS CO.	SHREVEPORT	$5.50	NA	$11.10	$11.90	$237.18	ELECTRICITY
	ENTEX, INC.	LAKE CHARLES	$4.75	$6.48	$23.45	$10.37	$171.00	ELECTRICITY
	LOUISIANA GAS SERVICE CO.	HARVEY	$6.98	NA	$21.75	$12.01	$385.99	ELECTRICITY

DIVISION / STATE	COMPANY	PRINCIPAL CITY SERVED	AS OF DECEMBER 31, 1990 NATURAL GAS	FUEL OIL	ELECTRIC	PROPANE	GAS HTG. BILL	COMPETITIVE FUEL
OKLAHOMA								
	ARKANSAS LOUISIANA GAS CO.	LAWTON	$4.91	NA	$11.24	$8.52	$226.93	ELECTRICITY
	ARKANSAS OKLAHOMA GAS CORP.	SALLISAW	$5.92	NA	$20.13	$10.37	$290.08	ELECTRICITY
	LONE STAR GAS CO.	DURANT	$5.91	NA	$19.61	$7.42	$242.31	ELECTRICITY
	OKLAHOMA NATURAL GAS CO.	OKLAHOMA CITY	$4.96	NA	$10.86	$6.77	$310.50	ELECTRICITY
TEXAS								
	ARKANSAS LOUISIANA GAS CO.	TEXARKANA	$4.31	NA	$10.37	$9.83	$172.75	ELECTRICITY
	CITY PUBLIC SERVICE	SAN ANTONIO	$5.02	NA	$18.90	$16.38	$138.31	ELECTRICITY
	ENTEX, INC.	HOUSTON	$5.75	NA	$23.74	$10.15	$184.00	ELECTRICITY
	LONE STAR GAS CO.	DALLAS	$5.91	NA	$19.61	$7.42	$242.31	ELECTRICITY
	SOUTHERN UNION GAS CO.	AUSTIN	$4.75	$4.34	$24.03	$8.19	$137.75	ELECTRICITY
MOUNTAIN								
ARIZONA								
	CITIZENS UTILITIES CO.	NOGALES	$7.12	NA	$26.14	$15.26	$284.64	PROPANE
	SOUTHWEST GAS CORP. – TUCSON	TUCSON	$7.18	$8.15	$23.21	$14.52	$200.24	ELECTRICITY
	SOUTHWEST GAS CORP. – PHOENIX	PHOENIX	$6.48	$7.01	$21.98	$11.57	$165.89	ELECTRICITY
COLORADO								
	CITY OF COLORADO SPRINGS	COLORADO SPRI	$4.93	NA	$16.00	NA	$305.35	ELECTRICITY
	K N ENERGY, INC.	YUMA	$5.00	NA	NA	NA	$397.63	ELECTRICITY
	PEOPLES NATURAL GAS (UTILICORP)	FOUNTAIN	$3.41	$6.61	$17.44	$9.28	$296.67	NA
	PUBLIC SERVICE OF COLORADO	DENVER	$4.35	$5.63	$24.77	$4.76	$317.36	ELECTRICITY
IDAHO								
	INTERMOUNTAIN GAS CO.	BOISE	$4.97	$7.61	$13.78	$13.09	$267.88	ELECTRICITY
	WASHINGTON WATER POWER	LEWISTON	$4.19	$7.82	$14.16	$10.37	$296.30	ELECTRICITY
MONTANA								
	GREAT FALLS GAS CO.	GREAT FALLS	$4.29	$6.35	$19.05	$10.92	$289.03	ELECTRICITY
	MONTANA–DAKOTA UTILITIES CO.	BILLINGS	$3.91	$6.34	$20.52	$9.05	$268.66	ELECTRICITY
NEVADA								
	SIERRA PACIFIC POWER COMPANY	RENO	$5.43	$7.01	$22.54	$14.19	$331.31	ELECTRICITY
	SOUTHWEST GAS CORP. – LAS VEGAS	LAS VEGAS	$4.68	NA	$14.48	$13.32	$183.46	ELECTRICITY
	SOUTHWEST GAS CORP. – CARSON CITY	CARSON CITY	$4.53	$6.54	$22.41	$11.79	$294.71	ELECTRICITY
NEW MEXICO								
	GAS COMPANY OF NEW MEXICO	ALBUQUERQUE	$4.55	NA	$22.71	$9.28	$371.97	ELECTRICITY
UTAH								
	MOUNTAIN FUEL SUPPLY CO.	SALT LAKE CITY	$5.48	$7.12	$18.00	$9.19	$395.90	ELECTRICITY
WYOMING								
	CODY GAS COMPANY	CODY	$3.57	NA	$14.36	$10.16	$239.15	ELECTRICITY
	K N ENERGY, INC.	DOUGLAS	$4.64	$6.15	$21.98	$9.83	$357.37	ELECTRICITY
	MONTANA–DAKOTA UTILITIES CO.	SHERIDAN	$4.14	$6.34	$20.52	$9.05	$310.95	ELECTRICITY
	MOUNTAIN FUEL SUPPLY CO.	GREEN RIVER	$5.85	$6.66	$11.00	$13.86	$483.12	ELECTRICITY
	WYOMING GAS CO.	WORLAND	$4.88	$5.95	$72.10	$10.70	$379.66	ELECTRICITY
PACIFIC								
CALIFORNIA								
	CITY OF LONG BEACH	LONG BEACH	$4.87	$3.57	$30.77	$5.84	$112.01	ELECTRICITY
	PACIFIC GAS AND ELECTRIC	SAN FRANCISCO	$4.89	$6.13	$37.51	$11.14	$166.75	PROPANE
	SAN DIEGO GAS & ELECTRIC	SAN DIEGO	$5.13	NA	$32.95	$14.19	$112.86	ELECTRICITY
	SOUTHERN CALIFORNIA GAS CO.	LOS ANGELES	$6.18	$7.42	$33.12	$11.57	$144.22	ELECTRICITY
	SOUTHWEST GAS CORP.	VICTORVILLE	$6.30	$0.00	$26.96	$12.88	$234.36	PROPANE
OREGON								
	CASCADE NATURAL GAS CORP.	BEND	$5.43	$7.21	$15.83	$15.83	$325.70	ELECTRICITY
	NORTHWEST NATURAL GAS CO.	PORTLAND	$6.29	$8.35	$13.39	$12.01	$393.82	ELECTRICITY
WASHINGTON								
	CASCADE NATURAL GAS CORP.	SEATTLE	$4.69	$7.66	$15.83	$12.66	$281.39	ELECTRICITY
	NORTHWEST NATURAL GAS	VANCOUVER	$6.06	$8.35	$10.26	$12.55	$524.80	ELECTRICITY
	WASHINGTON NATURAL GAS CO.	SEATTLE	$5.06	$7.64	$12.49	$13.86	$372.35	ELECTRICITY
	WASHINGTON WATER POWER	SPOKANE	$3.06	$7.82	$14.16	$10.37	$258.84	ELECTRICITY
	NORTHWEST NATURAL GAS	VANCOUVER	$6.06	$8.35	$10.26	$12.55	$524.80	ELECTRICITY
	WASHINGTON NATURAL GAS CO.	SEATTLE	$5.06	$7.64	$12.49	$13.86	$372.35	ELECTRICITY
	WASHINGTON WATER POWER	SPOKANE	$3.06	$7.82	$14.16	$10.37	$258.84	ELECTRICITY

Appendix 3
Additions From New Construction and Conversions

APPENDIX 3--ADDITIONS FROM NEW CONSTRUCTION AND CONVERSIONS

DIVISION / STATE / COMPANY	ADDITIONS FROM NEW CONSTRUCTION 1990	ADDITIONS FROM NEW CONSTRUCTION 1991	TOTAL CONVERSIONS TO GAS 1990	TOTAL CONVERSIONS TO GAS 1991	LESS TOTAL LOSSES 1990	LESS TOTAL LOSSES 1991	NET ADDITIONS 1990	NET ADDITIONS 1991
NEW ENGLAND								
CONNECTICUT								
SOUTHERN CONNECTICUT GAS CO.	660	600	2,134	2,200	N/A	N/A	2,794	2,800
YANKEE GAS SERVICES CO.	1,066	1,247	1,200	1,265	0	110	2,266	2,402
MAINE								
NORTHERN UTILITIES	100	100	800	950	300	300	600	750
MASSACHUSETTS								
BAY STATE GAS COMPANY	2,000	2,000	4,900	5,100	1,400	1,100	5,500	6,000
BERKSHIRE GAS COMPANY	150	110	332	425	23	23	459	512
BOSTON GAS CO.	1,637	1,800	6,927	7,300	N/A	N/A	8,564	9,100
COLONIAL GAS CO. – CAPE COD	970	1,110	1,412	1,890	N/A	N/A	2,382	3,000
COLONIAL GAS CO. – LOWELL	1,150	800	2,848	4,590	774	700	3,224	4,690
COMMONWEALTH GAS CO.	1,159	1,548	2,595	N/A	N/A	N/A	3,754	1,548
ESSEX COUNTY GAS CO.	473	558	917	600	N/A	N/A	1,390	1,158
FALL RIVER GAS CO.	N/A	N/A	606	400	N/A	N/A	606	400
NEW HAMPSHIRE								
ENERGYNORTH	349	400	537	637	64	63	822	974
NORTHERN UTILITIES	200	200	700	800	100	100	800	900
RHODE ISLAND								
PROVIDENCE GAS CO.	1,669	N/A	1,069	N/A	N/A	N/A	2,738	0
VALLEY GAS CO.	119	75	475	370	14	18	580	427
VERMONT								
VERMONT GAS SYSTEMS	333	450	1,109	655	N/A	N/A	1,442	1,105
MIDDLE ATLANTIC								
NEW JERSEY								
ELIZABETHTOWN GAS CO.	1,233	1,176	3,340	3,721	N/A	N/A	4,573	4,897
NEW JERSEY NATURAL GAS COMPANY	4,319	5,668	3,226	392	213	N/A	7,332	6,060
PUBLIC SERVICE ELECTRIC & GAS	N/A	N/A	14,319	N/A	N/A	N/A	14,319	0
SOUTH JERSEY GAS CO.	8,047	4,240	1,544	3,330	1,873	1,173	7,718	6,397
NEW YORK								
BROOKLYN UNION GAS CO.	9,059	8,000	8,109	8,000	N/A	N/A	17,168	16,000
CENTRAL HUDSON GAS & ELECTRIC	413	309	281	300	0	0	694	609
COLUMBIA GAS OF NEW YORK	330	315	447	400	37	146	740	569
CONSOLIDATED EDISON CO.	2,033	1,625	3,173	4,600	N/A	N/A	5,206	6,225
LONG ISLAND LIGHTING CO.	1,810	1,200	6,610	6,300	N/A	N/A	8,420	7,500
NATIONAL FUEL GAS DISTRICT	2,277	2,300	556	574	N/A	N/A	2,833	2,874
NEW YORK STATE ELECTRIC & GAS CO.	985	N/A	2,000	3,000	N/A	N/A	2,985	3,000
ORANGE & ROCKLAND UTILITIES	1,215	1,530	N/A	1,530	N/A	N/A	1,215	3,060
ROCHESTER GAS & ELECTRIC	3,472	2,517	1,067	925	417	342	4,122	3,100
ST. LAWRENCE GAS CO.	29	35	438	260	12	17	455	278
PENNSYLVANIA								
COLUMBIA GAS OF PA	3,630	2,686	810	827	18	726	4,422	2,787
EQUITABLE RESOURCES	340	400	10	5	480	300	(130)	105
NATIONAL FUEL GAS DIST.	760	1,044	404	732	101	N/A	1,063	1,776
NORTH PENN GAS CO.	299	N/A	210	N/A	N/A	N/A	509	0
PENNSYLVANIA GAS & WATER	951	1,000	3,480	2,900	0	0	4,431	3,900
PEOPLES NATURAL GAS CO.	227	N/A	601	509	237	N/A	591	509
PHILADELPHIA ELECTRIC CO.	4,273	N/A	3,254	N/A	N/A	N/A	7,527	0
PHILADELPHIA GAS WORKS	1,985	1,800	1,630	1,800	N/A	N/A	3,615	3,600
PIKE COUNTY LIGHT & POWER	N/A	0	15	0	N/A	0	15	0
UGI CORPORATION	3,001	2,211	3,780	3,304	1,186	425	5,595	5,090
EAST NORTH CENTRAL								
ILLINOIS								
ILLINOIS POWER CO.	N/A	N/A	150	N/A	N/A	N/A	150	0
IOWA–ILLINOIS GAS & ELECTRIC	186	200	33	35	32	0	187	235
NORTH SHORE GAS CO.	2,959	2,338	153	160	100	100	3,012	2,398
NORTHERN ILLINOIS GAS CO.	35,707	29,800	1,526	1,500	6,056	6,000	31,177	25,300
PEOPLES GAS LIGHT & COKE	2,638	2,902	501	623	1,100	1,100	2,039	2,425
UNITED CITIES GAS CO.	184	150	94	95	0	0	278	245
WISCONSIN POWER & LIGHT CO.	N/A	32	N/A	25	N/A	N/A	0	57
INDIANA								
CITIZENS GAS & COKE UTILITY	2,171	N/A	1,340	N/A	N/A	N/A	3,511	0
KOKOMO GAS & FUEL CO.	160	200	153	270	124	120	189	350
LAWRENCEBURG GAS CO.	20	N/A	91	N/A	N/A	N/A	111	0
NORTHERN INDIANA PUBLIC SERVICE C	14,507	N/A	1,170	1,600	N/A	250	15,677	1,350
OHIO VALLEY GAS CORP.	79	70	548	380	11	9	616	441

DIVISION STATE COMPANY	ADDITIONS FROM NEW CONSTRUCTION 1990	1991	TOTAL CONVERSIONS TO GAS 1990	1991	LESS TOTAL LOSSES 1990	1991	NET ADDITIONS 1990	1991
MICHIGAN								
BATTLE CREEK GAS COMPANY	388	N/A	140	185	157	100	371	85
CONSUMERS POWER CO.	16,000	16,500	1,536	2,500	N/A	N/A	17,536	19,000
MICHIGAN CONSOLIDATED GAS	14,000	12,000	3,000	2,000	5,000	5,000	12,000	9,000
MICHIGAN GAS CO.	1,153	1,175	1,041	1,325	463	300	1,731	2,200
MICHIGAN GAS UTILITIES CO.	2,400	2,400	1,300	1,300	2,700	2,000	1,000	1,700
WISCONSIN PUBLIC SERVICE	69	70	113	80	N/A	N/A	182	150
OHIO								
CINCINNATI GAS & ELECTRIC	3,280	N/A	2,063	N/A	150	N/A	5,193	0
COLUMBIA GAS OF OHIO	16,087	9,508	4,444	3,596	2,063	2,844	18,468	10,260
DAYTON POWER & LIGHT	1,750	N/A	N/A	N/A	N/A	N/A	1,750	0
EAST OHIO GAS CO.	7,683	7,500	3,137	3,500	3,600	N/A	7,220	11,000
OHIO GAS CO.	326	300	290	285	80	80	536	505
WEST OHIO GAS CO.	446	450	442	723	600	88	288	1,085
WISCONSIN								
MADISON GAS & ELECTRIC	1,246	2,076	N/A	N/A	N/A	N/A	1,246	2,076
SUPERIOR WATER, LIGHT & POWER	69	70	113	80			182	150
WISCONSIN FUEL & LIGHT CO.	471	467	783	777	0	0	1,254	1,244
WISCONSIN GAS CO.	2,825	2,643	4,401	4,117	322	350	6,904	6,410
WISCONSIN NATURAL GAS CO.	7,472	8,200	2,155	2,125	N/A	N/A	9,627	10,325
WISCONSIN POWER & LIGHT CO.	346	1,395	700	1,125	N/A	N/A	1,046	2,520
WISCONSIN PUBLIC SERVICE	1,500	1,500	2,300	1,700	25	25	3,775	3,175
WISCONSIN SOUTHERN GAS CO.	833	800	303	400	0	0	1,136	1,200
WEST NORTH CENTRAL								
IOWA								
IOWA ELECTRIC LIGHT & POWER	821	500	N/A	N/A	N/A	N/A	821	500
IOWA–ILLINOIS GAS & ELECTRIC	1,894	1,900	357	335	154	75	2,097	2,160
PEOPLES NATURAL GAS (UTILICORP)	707	672	1,385	1,524	N/A	N/A	2,092	2,196
UNITED CITIES GAS CO.	5	5	35	35	0	0	40	40
KANSAS								
ARKANSAS LOUISIANA GAS CO.	3	3	N/A	N/A	N/A	N/A	3	3
KANSAS PUBLIC SERVICE	582	600	0	0	31	35	551	565
MIDWEST ENERGY, INC.	31	35	4	3	5	7	30	31
PEOPLES NATURAL GAS (UTILICORP)	275	261	15	17	N/A	N/A	290	278
UNITED CITIES GAS CO.	950	1,000	30	50	0	0	980	1,050
MINNESOTA								
AUSTIN UTILITIES	50	55	11	0	23	25	38	30
CITY OF DULUTH	200	100	300	N/A	75	75	425	25
MINNEGASCO, INC.	6,521	6,500	1,662	1,605	0	N/A	8,183	8,105
NORTHERN STATES POWER CO.	4,086	4,000	4,925	3,450	N/A	N/A	9,011	7,450
PEOPLES NATURAL GAS (UTILICORP)	2,234	2,122	1,029	1,132	N/A	N/A	3,263	3,254
MISSOURI								
CITY OF SPRINGFIELD	723	N/A	N/A	N/A	N/A	N/A	723	0
LACLEDE GAS CO.	5,261	5,300	829	800	2,910	3,000	3,180	3,100
ST. JOSEPH LIGHT & POWER CO.	40	N/A	39	N/A	1	N/A	78	0
UNITED CITIES GAS CO.	102	110	47	60	0	0	149	170
NEBRASKA								
HASTINGS UTILITIES	11	N/A	0	N/A	14	N/A	(3)	0
METROPOLITAN UTILITIES DIST.	1,724	1,500	540	505	66	69	2,198	1,936
MINNEGASCO, INC.	1,223	800	218	100	50	50	1,391	850
NORTHWESTERN PUBLIC SERVICE	360	300	1	0	5	5	356	295
PEOPLES NATURAL GAS (UTILICORP)	423	402	354	389	N/A	N/A	777	791
NORTH DAKOTA								
MONTANA–DAKOTA UTILITIES CO.	391	N/A	97	N/A	N/A	N/A	488	0
NORTHERN STATES POWER CO.	445	400	513	450	N/A	N/A	958	850
SOUTH DAKOTA								
MINNEGASCO, INC.	539	550	217	120	N/A	N/A	756	670
MONTANA–DAKOTA UTILITIES CO.	206	N/A	278	N/A	N/A	N/A	484	0
NORTHWESTERN PUBLIC SERVICE	115	300	199	200	0	0	314	500
SOUTH ATLANTIC								
DELAWARE								
CHESAPEAKE UTILITIES CORP.	559	N/A	82	N/A	2	N/A	639	0
DELMARVA POWER & LIGHT	1,020	N/A	N/A	N/A	N/A	N/A	1,020	0
DISTRICT OF COLUMBIA								
WASHINGTON GAS LIGHT CO.	1,817	2,000	505	850	1,195	1,000	1,127	1,850
FLORIDA								
PEOPLES GAS SYSTEM, INC.	450	400	630	755	40	40	1,040	1,115

DIVISION STATE COMPANY	ADDITIONS FROM NEW CONSTRUCTION 1990	1991	TOTAL CONVERSIONS TO GAS 1990	1991	LESS TOTAL LOSSES 1990	1991	NET ADDITIONS 1990	1991
GEORGIA								
ATLANTA GAS LIGHT COMPANY	21,942	30,000	5,009	6,150	N/A	N/A	26,951	36,150
UNITED CITIES GAS CO.	646	650	62	65	0	0	708	715
MARYLAND								
BALTIMORE GAS & ELECTRIC	1,434	2,800	2,625	2,500	2,029	1,992	2,030	3,308
CHESAPEAKE UTILITIES CORP.	152	N/A	24	N/A	20	N/A	156	0
COLUMBIA GAS OF MD	395	435	184	104	0	62	579	477
WASHINGTON GAS LIGHT CO.	3,409	2,200	534	725	261	300	3,682	2,625
NORTH CAROLINA								
CITY OF WILSON	63	89	148	190	N/A	N/A	211	279
NORTH CAROLINA NATURAL GAS	600	700	2,100	2,300	100	100	2,000	2,900
PIEDMONT NATURAL GAS CO.	1,045	N/A	3,235	N/A	0	0	4,280	0
PUBLIC SERVICE OF NC	5,160	5,300	5,920	5,933	1,098	1,090	9,982	10,143
SOUTH CAROLINA								
PIEDMONT NATURAL GAS CO.	292	N/A	1,084	N/A	0	0	1,376	0
UNITED CITIES GAS CO.	60	60	60	70	0	0	120	130
VIRGINIA								
CITY OF CHARLOTTESVILLE	184	N/A	56	N/A	N/A	N/A	240	0
CITY OF RICHMOND	1,000	750	600	500	0	0	1,600	1,250
COMMONWEALTH GAS SERVICES	5,285	3,655	1,409	1,225	471	294	6,223	4,586
UNITED CITIES GAS CO.	466	N/A	433	505	0	0	899	505
VIRGINIA NATURAL GAS	7,066	4,950	1,025	900	40	50	8,051	5,800
WASHINGTON GAS LIGHT CO.	7,262	3,500	741	900	437	500	7,566	3,900
WEST VIRGINIA								
HOPE GAS CO.	698	535	84	95	67	67	715	563
EAST SOUTH CENTRAL								
ALABAMA								
ALABAMA GAS CORP.	3,145	3,000	1,594	1,700	700	N/A	4,039	4,700
CITY OF FLORENCE	147	N/A	374	N/A	15	N/A	506	0
DECATUR UTILITIES	212	200	346	300	10	12	548	488
HUNTSVILLE UTILITIES GAS DEPT.	950	420	419	300	68	43	1,301	677
MOBILE GAS SERVICE CORP.	439	500	349	480	280	274	508	706
SOUTHEAST ALABAMA GAS DISTRICT	N/A	500	N/A	250	N/A	N/A	0	750
KENTUCKY								
COLUMBIA GAS OF KY	1,969	1,677	377	412	612	537	1,734	1,552
LOUISVILLE GAS & ELECTRIC	1,000	N/A	N/A	N/A	N/A	N/A	1,000	0
UNION LIGHT, HEAT & POWER	845	N/A	N/A	N/A	N/A	N/A	845	0
WESTERN KENTUCKY GAS CO.	1,357	1,100	1,263	900	N/A	N/A	2,620	2,000
MISSISSIPPI								
ENTEX, INC.	1,095	1,000	545	530	1,190	1,030	450	500
MISSISSIPPI VALLEY GAS CO.	2,290	2,000	1,341	1,000	927	1,000	2,704	2,000
TENNESSEE								
MIDDLE TENNESSEE NATURAL GAS	1,134	875	1,533	1,030	40	40	2,627	1,865
NASHVILLE GAS CO.	1,850	2,100	2,566	N/A	N/A	N/A	4,416	2,100
MEMPHIS LIGHT, GAS & WATER	4,597	1,250	1,690	N/A	N/A	N/A	6,287	1,250
UNITED CITIES GAS CO.	3,171	3,200	1,631	1,650	0	0	4,802	4,850
ARKANSAS								
ARKANSAS LOUISIANA GAS CO.	1,050	1,060	N/A	N/A	N/A	N/A	1,050	1,060
ARKANSAS WESTERN GAS CO.	2,166	2,231	N/A	N/A	N/A	N/A	2,166	2,231
LOUISIANA								
ARKANSAS LOUISIANA GAS CO.	248	251	N/A	N/A	N/A	N/A	248	251
ENTEX, INC.	330	370	225	147	620	720	(65)	(203)
LOUISIANA GAS SERVICE CO.	1,940	2,000	225	270	465	475	1,700	1,795
OKLAHOMA								
ARKANSAS LOUISIANA GAS CO.	109	110	N/A	N/A	N/A	N/A	109	110
LONE STAR GAS CO.	211	200	2	N/A	376	N/A	(163)	200
OKLAHOMA NATURAL GAS CO.	5,404	5,942	783	3,000	N/A	1,300	6,187	7,642
TEXAS								
ARKANSAS LOUISIANA GAS CO.	153	155	N/A	N/A	N/A	N/A	153	155
CITY PUBLIC SERVICE	0	0	0	0	1,621	144	(1,621)	(144)
ENTEX, INC.	26,072	25,767	3,307	3,021	600	705	28,779	28,083
LONE STAR GAS CO.	7,521	7,500	142	142	N/A	N/A	7,663	7,642
SOUTHERN UNION GAS CO.	14,251	8,195	2,200	2,580	0	140	16,451	10,635

DIVISION STATE COMPANY	ADDITIONS FROM NEW CONSTRUCTION 1990	 1991	TOTAL CONVERSIONS TO GAS 1990	 1991	LESS TOTAL LOSSES 1990	 1991	NET ADDITIONS 1990	 1991
MOUNTAIN								
ARIZONA								
CITIZENS UTILITIES CO.	52	50	15	30	0	0	67	80
SOUTHWEST GAS CO.	7,650	8,000	2,241	2,600	950	800	8,941	9,800
COLORADO								
CITY OF COLORADO SPRINGS	785	600	N/A	N/A	N/A	N/A	785	600
PEOPLES NATURAL GAS (UTILITICORP)	519	493	586	645	N/A	N/A	1,105	1,138
PUBLIC SERVICE OF COLORADO	11,490	9,812	N/A	N/A	N/A	N/A	11,490	9,812
IDAHO								
INTERMOUNTAIN GAS CO.	2,408	2,467	3,196	2,388	N/A	N/A	5,604	4,855
WASHINGTON WATER POWER	424	291	366	386	0	0	790	677
MONTANA								
GREAT FALLS GAS CO.	72	70	356	115	46	0	382	185
MONTANA–DAKOTA UTILITIES CO.	101	N/A	184	N/A	N/A	N/A	285	0
NEVADA								
SIERRA PACIFIC POWER COMPANY	2,136	2,400	900	500	0	0	3,036	2,900
SOUTHWEST GAS CORP.	14,291	14,662	755	1,050	100	100	14,946	15,612
NEW MEXICO								
GAS COMPANY OF NEW MEXICO	4,194	N/A	1,505	1,000	0	10	5,699	990
UTAH								
MOUNTAIN FUEL SUPPLY CO.	8,251	8,403	996	N/A	818	N/A	8,429	8,403
WYOMING								
CODY GAS COMPANY	13	N/A	13	N/A	3	N/A	23	0
MONTANA–DAKOTA UTILITIES CO.	30	N/A	9	N/A	N/A	N/A	39	0
MOUNTAIN FUEL SUPPLY CO.	157	162	20	N/A	109	N/A	68	162
WYOMING GAS CO.	8	N/A	N/A	N/A	2	0	6	0
PACIFIC								
CALIFORNIA								
CITY OF LONG BEACH	779	N/A	N/A	N/A	150	N/A	629	0
PACIFIC GAS AND ELECTRIC	125,000	139,000	N/A	N/A	N/A	N/A	125,000	139,000
SAN DIEGO GAS & ELECTRIC	16,400	10,100	0	0	0	0	16,400	10,100
SOUTHERN CALIFORNIA GAS CO.	101,367	80,000	N/A	N/A	5,707	6,000	95,660	74,000
SOUTHWEST GAS CORP.	5,397	4,667	577	200	4	6	5,970	4,861
OREGON								
CASCADE NATURAL GAS CORP.	849	800	692	730	N/A	N/A	1,541	1,530
NORTHWEST NATURAL GAS CO.	8,606	6,930	5,787	4,910	418	1,750	13,975	10,090
WASHINGTON								
CASCADE NATURAL GAS CORP.	2,858	2,460	3,468	4,300	N/A	N/A	6,326	6,760
NORTHWEST NATURAL GAS CO.	1,174	950	307	290	104	110	1,377	1,130
WASHINGTON NATURAL GAS CO.	13,993	6,927	12,600	16,670	N/A	N/A	26,593	23,597
WASHINGTON WATER POWER	850	661	1,446	1,542	0	0	2,296	2,203

American Gas Association

© Printed in USA

Catalog Number F00091